

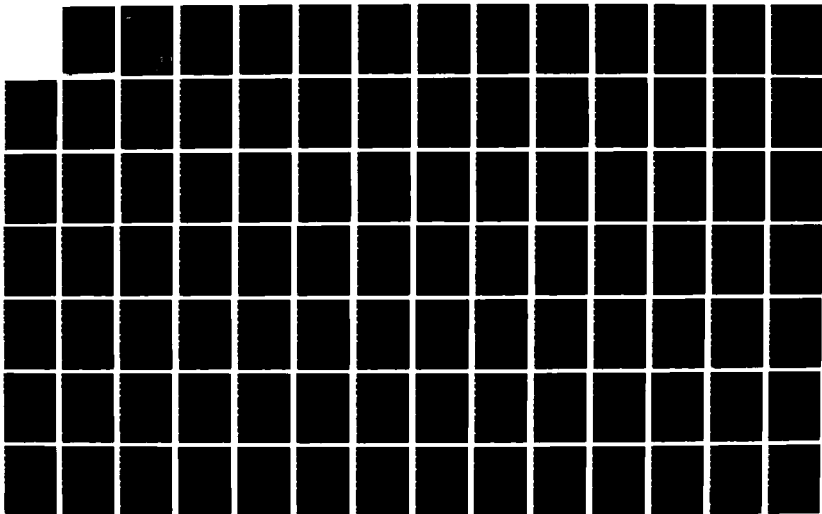
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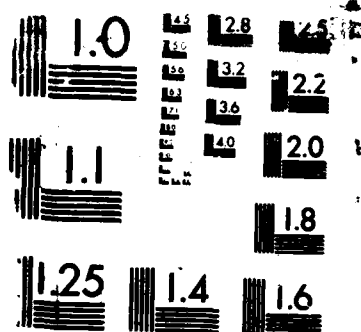
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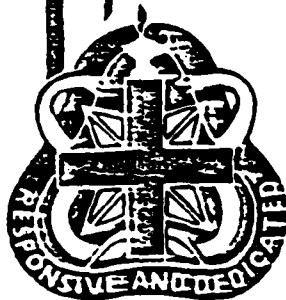




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United States Army
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AD-A188 996

CONVERSION OF ICD-9 AND ICPM DATA TO ICD-9-CM
WITH ADAPTATION TO DRGs

FINAL REPORT

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Report #87-007

Part B

August 1987

US ARMY

HEALTH SERVICES COMMAND

FORT SAM HOUSTON, TEXAS 78234

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1. INTRODUCTION

Analysts and policy makers interested in applying case complexity methodologies to the Army Medical Department (AMEDD) or Department of Defense (DoD) Medical Treatment Facilities (MTFs) need to accommodate the impact of recoded International Classification of Diseases, Ninth Revision (ICD-9) and International Classification of Procedures in Medicine (ICPM) data to International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). The ICD-9-CM classification includes many more codes than ICD-9 and ICPM, requiring a number of translation decisions. The results of this conversion process will enable health care analysts to perform longitudinal case mix analyses of AMEDD or DoD inpatient biostatistical data from Fiscal Year (FY) 81-85. The conversion methods employed in this study could be used as the basis for any subsequent conversions between coding conventions. This report details the strengths and weaknesses of the converted data and any limitations and considerations necessary in the application of the data to various projects.

1.1. Purpose

The purpose of this work was to develop a methodology to classify AMEDD biostatistical data using Diagnosis Related Groups (DRGs) enabling MTF level case complexity analysis.

1.2. Background

The basis for initiating work on the conversion of data to ICD-9-CM was a result of the recommendations of the Health Services Command (HSC) Productivity Study to initiate some form of case sensitive workload reporting and performance measurement. In December, 1983, the HSC Productivity Study was reinitiated as a much larger effort with a broader scope. The Army Surgeon General directed HSC to conduct a study with the following purpose:

To evaluate current measures of AMEDD health care system performance and, as required, develop better measures and workload data capture systems which accurately reflect actual resource utilization.

The initial effort of the Inpatient Analysis Group of the Performance Measurement Study (PMS) was directed at gaining an effective interface for biometric data with an established case mix "package." The primary limitation of case mix software produced in the United States was that it was designed to use data classified according to the ICD-9-CM coding convention, which was not the coding convention used within the Army Medical Department for coding inpatient data. The diagnosis coding structure used by the Department of Defense was the World Health Organization (WHO) publication of the International Classification of Diseases, Ninth Revision, 1978. The procedure coding was performed using the International Classification of Procedures in Medicine, 1977. The International Classification of Diseases, Ninth Revision, Clinical Modification is the United States version of ICD-9 authorized by the World Health Organization Collaborating Center for Classification of Diseases for North America (WHO Center/NA) at the National Center for Health Statistics (NCHS). It was published in 1978 and mandated for use in the United States for reporting all diseases and procedures for federally reimbursed programs effective January, 1979.

It became evident that if the AMEDD were going to employ case mix analyses, it would be necessary to either develop AMEDD diagnosis and procedure groups and, subsequently, select or derive product type weights based on AMEDD data or apply AMEDD data to an established scheme. The decision was made that it would be more appropriate to devise a way to use the "nationally known" software and grouping scheme, the new ICD-9-CM DRGs. Using the Medicare Prospective Payment System DRGs and relative weights would mean that the AMEDD could maintain a relationship to national DRG normative data, adding a significant dimension to the study. Additionally, the ability to improve analysis of data with a sizeable reduction in the number of groups when using DRGs was also an important consideration.

1.3. A Review of Conversion and Adaptation Efforts

Results of converting coded medical data from one convention to another have not been widely published. Schneeweiss, et al. (1977) have been involved in two major reclassification efforts involving primary care data. The authors initially recoded data from the Royal College of General Practitioners (RCGP) Classification of Diseases into the International Classification of Health Problems in Primary Care (ICHPPC). The motivation for their initial conversion project was to allow the users of the RCGP Classification to benefit from the newer classification system that had been produced under the auspices of the World Health Organization of National College and Academies of General Practice/Family Medicine (WONCA) and was endorsed by the North American Primary Care Research Group (NAPCRG) as well as the central office of the International Classification of Diseases Adapted (ICDA). The classification enjoyed wide application in the ambulatory care setting. The authors noted problems with reclassification, but indicated it was an effective reclassification, strongly recommending its usage. The authors offered detailed rubric-by-rubric analysis of the changes. Table 1-1 summarizes the situation they were confronted with at the beginning of their project.

Table 1-1: RCGP TO ICHPPC CONVERSION SUMMARY

	RCGP	ICHPPC
NUMBER OF CATEGORIES		
MAJOR CATEGORIES	22	18
DIAGNOSIS TITLES	628	371

As we learned during our conversion project, a situation where a researcher is adapting from a convention with more codes to a convention with less codes is preferable because it offers a better opportunity for an accurate target or converted data base.

In a subsequent conversion effort, Schneeweiss, et al. (1977) provided a suggested methodology for converting ICHPPC-1 codes to ICHPPC-2. The purpose of their second conversion was to offer a more accepted classification scheme.

ICHPPC-2 has additional advantages of being approved by WHO as an "official adaptation" of ICD-9. In the ICHPPC-2 conversion, the authors elaborated more on the technique employed in the translation and the problems they faced. They cited "exact correspondence" or a lack of rubric translation quality as a significant problem. Their examples included cases where disease was confined to one code in ICHPPC-1 and spread across several codes in ICHPPC-2. They also reported distortion in terms of ICHPPC-2 codes which did appear in the ICHPPC-1 version, making some classification decisions highly subjective. Schneeweiss et al. (1977) note that although some distortion is inevitable between code conversions, the "mapping" they provided minimizes the problems, allowing data to be combined with newly collected data (using ICHPPC-2) and longitudinally analyzed as if all data in the data base had been collected using the new classification.

M. Helen Colls (1980) reported conversion of the diagnostic codes of the Health Surveillance Registry in British Columbia from the Eighth Revision, International Classification of Diseases Adapted for use in the United States, (ICDA-8) to the ICD-9-CM. In this case, Colls was trying to meet the essential requirement of maintaining an ability to produce incidence, prevalence and other research data in the currently applicable coding convention. Colls chronicled similar project initiation problems. She reported only a few people were interested in the translation process and the most common immediate reaction to the conversion notion was the poor code equivalency between the source code and the target code classification and the difficulty of managing increased detail in the target code that could not be addressed from the source code data.

Colls found the most useful conversion assistance information from the Commission on Professional and Hospital Activities (CPHA) because of its large Professional Activities Study (PAS) data base containing inpatient record abstracts from acute care hospitals in North America. CPHA provided Colls' project team a number of materials, including "recommended" code conversion tables highlighting the following types of data:

- a) ICD-9-CM codes that did not convert from ICDA-8;
- b) forced conversion or "best choice" conversion;
- c) ICDA-8 codes not encountered in conversion from ICD-9-CM.

CPHA has been a major contributor to national coding policy and practices for many years and through many ICD revisions. During the last conversion, Virgil Slee, M.D., F.A.C.P., then President, CPHA, and President, Council on Clinical Classification, Ann Arbor, Michigan, was at the center of the North American and US conversion efforts. CPHA played a vital role in the development of the Clinical Modification of the Ninth Revision of the ICD. As a result of their in-depth experience, CPHA was in a position to not only effect the classifications within the Clinical Modification but because of the iterative nature of the work they developed an unmatched authoritative background on the critical considerations that need to be accounted for in any translation work. The requirement to continually review the new and old conventions provided them the basis to offer a series of "products" in the form of both software and "hard copy" tables referred to as "conversion tables".

These code conversion tables were used extensively by the project team to refine the transformation from the source code registry to the ICD-9-CM data base. Colls' team used the transformation tables to put the ICDA-8 codes into

three distinct groups:

- a) those ICDA-8 codes identical to the ICD-9-CM target code;
- b) those ICDA-8 codes with equivalent ICD-9-CM codes;
- c) those ICDA-8 codes with alternative ICD-9-CM codes.

The keys to the success of their conversion effort were CPHA data tables, extensive opportunity for clinical/medical consultation and a staff of experienced coding and classification personnel.

H. F. Sanderson (1984) adapted United Kingdom (UK) data to DRGs in a study which reports more on the behavior of DRGs from a statistical perspective than on the nosological implications of converting UK data to ICD-9-CM. Still, Sanderson's key recoding problems are worth noting because of the similarity to the problems faced in our translation effort.

Sanderson's results focused on five primary problems in dealing with the ICD-9-CM based DRGs:

- a) use of the fifth digits;
- b) the operation procedure coding system differences with ICD-9-CM;
- c) lack of specific items of data for splitting between DRGs;
- d) lack of suitable data for allocation of maternity DRGs;
- e) inappropriate allocation to "other surgical procedures" categories.

These problems resulted in their not being able to assign UK data to all possible DRGs.

The maternity code DRG problems encountered by Sanderson in the UK data were so significant as to prevent him from being able to even attempt a translation in that area. As a result, his report does not produce data for these high volume DRGs. These codes would have presented similar problems for AMEDD data except that DoD supplementary codes were employed to our advantage in this case. Beginning with CY82 data, DoD modifications to the ICD-9 codes in the maternity areas aligned the AMEDD and the Navy directly with the ICD-9-CM classification. This is one of the few areas where DoD coding modifications enhanced the project by adding translation and code equivalence to an area where there is high code "traffic" in our population. However, although Air Force concurred with the AMEDD and Navy's use of the maternity code fifth digits in ICD-9-CM, they continued using only four-digit codes for the maternity area, and zero-filled their maternity diagnostic fields for the fifth digit.

Sanderson's work presented a uniquely detailed statistical perspective which will be addressed in greater detail in a subsequent report addressing international aspects of ICD-9 converted DRG data.

1.4. The International Classification of Diseases

The International Classification of Diseases (ICD) is published by the

WHO, and its codes are used by member nations to collect and record morbidity and mortality statistics. The ICD is revised approximately every 10 years. Each ICD revision is developed by an international conference convened by the WHO. The Ninth Revision of the ICD codes was published in 1977 and was effective for coding purposes in December, 1978. The classification revision, however, is currently on a modified schedule, and the Ninth Revision is expected to be in force for approximately fifteen years (from 1979). The WHO's current plans are to hold an International Revision Conference in Geneva in 1989. The results of the conference would be brought before the World Health Assembly, WHO's governing body, in 1990. Thus, the target date for implementing ICD-10 would probably be 1993 or 1994. A working draft of the ICD-10 has been reviewed, and the new classification appears to be very different from the current. It seems to present another set of translation problems. It may be difficult to trace morbidity trends across the classifications. The concerns for adequacy and consistency across statistical classifications dates back to 1855 when the International Statistical Conference at Paris adopted a list of 139 rubrics to classify diseases and injuries (ICD-9, 1979). A number of authors have suggested that US morbidity data have been adversely impacted by coding convention changes.

One of the efforts to maintain the tradition of progress in the classification of diseases has been the practice, begun in 1900, to revise the ICD approximately every ten years. Each revision has produced some break in the comparability of morbidity and cause-of-death statistics. The Ninth Revision produced many changes, including shifts of inclusion terms and titles from one category, section or chapter to another; regroupings of diseases; new titles and sections; and modifications in coding rules. As a result there are serious breaks in comparability for a number of morbid conditions and causes of death. Measures of this discontinuity are essential to interpretation of morbidity and mortality trends. For this reason, ratios of comparability have been recommended by many national and international agencies and biostatisticians as a method of measuring the impact of coding changes as well as to increasing the viability of interpretation(s) of the new data from a longitudinal perspective.

Tedeschi (1984), studying Michigan Community Hospital Services data maintained by CPHA, found in the change from HICDA-2 (a US modification of ICDA-8) to ICD-9-CM that only about 75 percent of the discharges remained in the same rubric(s). The problem is magnified when health researchers' and analysts' estimates of surgical/nonsurgical use rates (and expected lengths of stay) provide unsound prediction data which may translate directly into erroneous conclusions about disease and surgical patterns.

Susan Gee (1985), a Veterans Administration biometrician, concerned about the transition in coding from ICDA-8 to ICD-9-CM said, "One cannot be sure whether apparent diagnostic trends are true trends or artifacts caused by changes in medical terminology coding". Gee noted that even though "conversion tables" were available they were not completely adequate because the correspondence between codes is not always exact. In her study, she reports the results of double coding medical records as a basis for obtaining comparability ratio data.

Kurtzke (1979) proposed that it was inadvisable to change coding classifications, noting that the coding changes of the 1970's (ICDA-8, H-ICDA, H-ICDA-2) had already compromised morbidity trend data. He felt the changes in classification that had already occurred were excessively problematic, creating a disturbing influence in the continuity of record-keeping and data-

retrieval. He was so emphatic that his concluding statement argued "...were it possible to do so at this late date. I would like to see ICD-9 tabled, with ICD-8 retained unchanged until a new 10th revision can be formulated." (Kurtzke 1979, p 36)

Because of the valid concerns articulated by the preceding authors as well as AMEDD biometricians and nosologists, every effort has been made in this project to create the most equivalent converted data. Careful documentation has been made of all major weaknesses which could result in over or under representation of diagnoses or procedures in the converted ICD-9-CM data base, along with the impact on DRG assignment and resulting case complexity analyses.

1.5. Canadian Case Mix Groups

While evaluating alternatives to the conversion program, it was discovered that Canada, where national health and morbidity data are coded in ICD-9, had used a grouping technique to initiate case mix studies of their inpatient facilities. They conducted these assessments employing a set of groups designed intentionally to be similar to the new ICD-9-CM DRGs, yet based on ICD-9 data. The Canadian ICD-9 based classification scheme is called Case Mix Groups (CMGs). This classification product was developed by the Hospital Medical Record Institute (HMRI, 1983). HMRI introduced the Case Mix Groups as a new method of classifying patients for utilization review. The CMGs are an adaptation of the DRGs developed by Yale and marketed, at that time, by the proprietary software group Puter Associates, New Haven, Connecticut. HMRI implemented these CMGs in their routine reporting mechanism, the Comparison of Hospital Activity Program Part 1 (CHAP 1) in FY83.

Following discussion and evaluation of the Canadian coding scheme and the HMRI CMGs, it was determined that a "map" or conversion program would still be necessary to use their system, since the procedure coding convention used to code Canadian procedure data was substantially different from the ICPM used by the AMEDD for coding procedures. The Canadian Bureau Of Statistics used a coding scheme called the Canadian Classification of Diagnostic, Therapeutic and Surgical Procedures (CCP) which was more specific than the ICPM, in fact, nearly as detailed as Volume III of ICD-9-CM. As a result, another form of mapping would have been required creating more coding translation and accuracy problems. This would also have meant using an entirely new classification system.

2. OBJECTIVES

The objectives of this study were as follows:

1. Develop a map from ICD-9 and ICPM to ICD-9-CM.
2. Convert IPDS data coded in ICD-9 and ICPM to ICD-9-CM.
3. Consult with proprietary data abstracters and related national statistical data bases to reach appropriate conclusions on the nosological implications of the conversion from one convention to another.
4. Create the most equivalent (accurately translated) ICD-9-CM data base to form the basis for assigning worldwide AMEDD data to DRGs.
5. Maximize the accuracy of the recoded data by deliberate, thorough comparison of morbid conditions as documented in the NCHS National Hospital Discharge Survey (NHDS) data for 1983.
6. Assign inpatient abstracts to DRGs using the Health Systems International (HSI) June, 1983 Grouper Program.

3. METHODOLOGY AND DATA LIMITATIONS

3.1. Methodology

Development of the crosswalk from ICD-9 and ICPM to ICD-9-CM was an iterative process. The basic conversion tables that Navy (Kay and Rieder, 1983) had developed were the starting point of the conversion process. Any diagnosis or procedure finding a match in the conversion table was given the converted diagnosis or procedure. If a match for a diagnosis was not found in the table, the diagnosis code was output to the new diagnosis field with no change, except that in cases where the fifth digit was blank, a zero was added. If procedure codes found no match in the tables, they were not converted at all, and blanks were written to their corresponding ICD-9-CM field. Analysis of initially converted data using Navy's tables, however, revealed that major expansion of the tables would be required.

A code-by-code review produced a new, expanded version of both the diagnosis and procedure maps. As biometric records were read into a FORTRAN computer program, their diagnoses and procedures were converted using the tables. Additionally, this conversion program recoded certain data elements into a format required by the HSI Grouper Program. The original biometric record along with the converted diagnosis and procedure fields and recoded data fields were written to a new file, which was input for the HSI grouper program. This program assigned the DRG as well as also producing additional data fields. The output records from this program were then sorted by hospital and DRG, and reports were created that permitted detailed assessment of appropriateness of conversion of diagnosis and procedure codes. After this assessment, modifications were made to the conversion maps to improve their accuracy, and the entire process was repeated. Six versions of the crosswalks were created before the authors felt the maps had produced the best approximation of data coded in ICD-9-CM. Further processing detail is given in Appendix B.

A by-product of the grouping process was case mix reports. These were developed to assess and validate the mapping and grouping process, but they also became an invaluable tool in assessment of hospital performance.

3.2. Data and Limitations

Data selected for study consisted of inpatient abstracts from the Individual Patient Data System (IPDS) maintained by the US Army Patient Administration Systems and Biostatistics Activity at Fort Sam Houston, Texas. This data system contains abstracts of inpatients from all U.S. Army hospitals, worldwide, as well as some administrative records. The administrative records include abstracts of active duty Army personnel treated in civilian hospitals for their entire period of hospitalization (absent sick cases) and those abstracts created for record only (referred to as "Carded for Record Only" (CROs)). These administrative records were excluded from the study sample selection.

The IPDS provides a process whereby abstracts can be input into the system after patient discharge prior to finalization of clinical data. When the charts are completed, replacement records are submitted to overlay the earlier record with a more complete abstract. For a variety of reasons some of these

earlier records are never replaced, and this particular group of records with incomplete clinical data were excluded from the study sample selection.

Initially, approximately 1.2 million records, were selected from FY81-FY83. The FY84-FY85 data were added to the study sample, making the total record count in excess of two million records. Records from all US Army hospitals worldwide were initially selected in the sample. However, after analysis it was recognized that absent sick cases, CROs, and records without clinical data should be excluded from the study. Final records selection was as follows:

Time period of data	FY81-FY85
Percent of Inpatient cases	99.4%
Record count by year:	
FY81	383,178
FY82	400,525
FY83	398,568
FY84	409,628
FY85	409,586
Total records in sample	2,001,485

The IPDS record is 240 characters in length containing demographic data, eight fields for diagnosis codes and up to eight fields for different procedure codes. The IPDS abstract is compatible in most respects to the Uniform Hospital Discharge Data Set (UHDDS) Abstract (Table 3-1).

Additionally, certain data elements unique to military requirements are collected, such as convalescent leave days, supplemental care days, cause of injury, and principal or underlying cause of separation. The records process through a comprehensive set of edit checks before being added to the system. Consistency checks are made between fields, as well as quality-focused edits. Age- and/or sex-specific diagnoses or procedures are verified. Admission and disposition date sequencing is checked, as well as computation of the days fields (convalescent leave, supplemental care, cooperative care, bed, sick, and other days). Rejected records from the edit processing are corrected and processed again through the edit cycle. Additionally, a quality control section performs quality-focused reviews on certain types of records such as deaths and disability separations, plus a ten percent sample of all records. At the time the record is added to the system, it is as error-free as possible using on-going quality review on a sample basis together with computer editing.

As in any study, results are subject to nonsampling or measurement errors, which include missing abstracts, information incompletely or inaccurately recorded on abstract forms, and processing errors. Missing records are estimated as approximately one percent of the data. This includes those records with clinical data missing. The percentage of the IPDS data excluded from study (total absent sick cases, CROs, and records with clinical data missing) by year was: FY81, 5.93 percent; FY82, 4.33 percent; FY83, 5.24 percent; FY84, 4.37 percent; and FY85, 4.36 percent.

Table 3-1: UNIFORM HOSPITAL DISCHARGE DATA SET (UHDDS)

DATA ELEMENTS * :	DEFINITIONS:
PERSONAL IDENTIFICATION	The unique number assigned to each patient that distinguishes the patient and his or her hospital records from others in that institution
DATE OF BIRTH	Month, day, and year of birth
SEX	Male or Female
RACE AND ETHNICITY	White, Black, Asian or Pacific Islander Spanish origin/Hispanic Non-spanish origin Non-Hispanic Other.
RESIDENCE	Zip code; Code for foreign residence
HOSPITAL IDENTIFICATION	A unique institutional number within a data collection system
ADMISSION AND DISCHARGE DATES	Month, date, and year of both admission and discharge.
PHYSICIAN IDENTIFICATION:	
ATTENDING	The attending physician; one who is primarily and largely responsible for care of patient from beginning of hospital episode.
OPERATING	The operating physician who performed the principal procedure.
DIAGNOSES	All diagnoses that affect the current hospital stay.
PROCEDURES AND DATES	A procedure, the identity (by unique number within hospital) of the person performing the procedure and the date must be reported.
DISPOSITION OF PATIENT	The discharged status of the patient Discharged to home (routine discharge) Left against medical advice Discharged to another short-term hospital Discharged to a long-term care institution Died, other.
EXPECTED PAYER FOR MOST OF THIS BILL (Anticipated Financial Guarantor for Services)	Single major source that patient expects will pay the bill.

* As approved in the 1984 Revision of the UHDDS

3.3. Modification of IPDS record format

The IPDS record was expanded to 352 characters in the study data base incorporating data elements which enable grouping and recoding action (see Table 3-2). Grouper output variables include such items as Major Diagnostic Category (MDC), DRG, and return code. Other variables displayed on the output or modified IPDS record include the recoded diagnosis and procedure data and other variables (e.g. sex, age and type of disposition) recoded specifically to meet Grouper input requirements. These values in the record provide the basis for case mix analysis at a variety of levels from aggregate worldwide statistics to individual hospital and department level studies.

3.4. Conversion Guidelines and Principal Considerations

The following guidelines were developed and employed in the code translation process:

1. The major consideration was the quality of code translation.
2. When there was no equivalent code, clinical judgment was used for code selection.
3. Volume of data coded to particular ICD-9-CM codes in other data bases was used to influence code selection.
4. In cases where choice of code would make a difference in MDC assignment, the code for the most appropriate body system was selected.
5. ICD-9 asterisk (manifestation) codes were mapped to basic disease when no equivalent code exists.
6. If equivalency of code translation, volume of data for code in other data bases, and clinical considerations could not effectively facilitate code selection, then a code that would group to a DRG having the most similar title or meaning was selected.

Table 3-2: MODIFIED IPDS RECORD FORMAT

FIELD DESCRIPTION	FIELD LENGTH	POSITION IN RECORD	TYPE CODES
Reporting Medical Treatment Facility (MTF)	4	1 - 4	AN
Register Number	7	5 - 11	AN
Grade	2	12 - 13	AN
Sex	1	14	A
Age	2	15 - 16	AN
Race	1	17	A
Length of Service	2	18 - 19	AN
Family Member Prefix	2	20 - 21	N
Social Security Number	9	22 - 30	N
Department/Type Beneficiary	3	31 - 33	AN
Zip Code	5	34 - 38	AN
Type Case	1	39	AN
Source of Admission	1	40	AN
Clinic Service	2	41 - 42	AN
Disposition	1	43	A
Date of Disposition	5	44 - 48	N
Date of this Admission	5	49 - 53	N
Date of Initial Admission	5	54 - 58	N
Absent Sick Bed Days This MTF	3	59 - 61	N
Other Days This MTF	3	62 - 64	N
Convalescent Leave/Cooperative Care Days			
This MTF	3	65 - 67	N
Supplemental Care Days This MTF	3	68 - 70	N
Bed Days This MTF	3	71 - 73	N
Sick Days This MTF	3	74 - 76	N
Transfer to VA Hosp/Autopsy/Civilian Hosp	1	77	AN
Location of Mobilization Operation	2	78 - 79	AN
MTF of Initial Admission	4	80 - 83	AN
Total Absent Sick Days to Date	3	84 - 86	N
Total Other Days to Date	3	87 - 89	N
Total Convalescent Leave/Cooperative			
Care Days to Date	3	90 - 92	N
Total Supplemental Care Days to Date	3	93 - 95	N
Total Bed Days to Date	3	96 - 98	N
Total Sick Days to Date	3	99 - 101	N
Preoperative Bed Days	2	102 - 103	N
Cause of Injury	3	104 - 106	AN
Underlying/Principal Cause (Deaths, Spns)	1	107	AN
(Internal processing code)	1	108	
Diagnoses: 8 Fields, each 7 characters	7	109 - 164	AN
Operations, Surg Procedures: 8 Fields,			
each 6 characters	6	165 - 212	AN
Residual Disability Causing Disability			
Separation/Retirement	3	213 - 215	AN
Supplemental Information		216 - 230	
Total Number of Diagnoses Fields Coded	1	231	N

Table 3-2: MODIFIED IPDS RECORD FORMAT (Continued)

FIELD DESCRIPTION	FIELD LENGTH	POSITION IN RECORD	TYPE CODES
Total Number of Procedure Fields Coded	1	232	N
Supplemental Information	8	233 -240	
Recoded Age	3	241 -243	N
Recoded Sex	1	244	N
Discharge Status (Recoded Disposition)	2	245 -246	N
Diagnoses: 8 Fields, each 5 characters, ICD-9 converted to ICD-9-CM	5	247 -286	AN
Operations, Procedures: 8 Fields, each 4 characters, ICPM converted to ICD-9-CM	4	287 -318	AN
Diagnosis Related Group (DRG)	3	319 -321	N
Major Diagnostic Category	2	322 -323	N
Return Code (from Grouper)	1	324	N
MPR (Procedure Used for DRG Selection)	4	325 -328	AN
ADX (Any Diagnosis Used for DRG Selection)	5	329 -333	AN
SDX (Secondary DG Used for DRG Selection)	5	334 -338	AN
Version Control Card (VCC)	12	339 -350	AN
Unused	2	351 -352	

4. RESULTS

4.1. The Necessity to "Map" AMEDD Data

Any attempt at analysis or classification of AMEDD data employing DRGs, Patient Management Categories (PMCs), Disease Staging (DS), Severity of Illness Index, Acute Physiology and Chronic Health Evaluation (APACHE), or Medical Illness Severity Grouping System (MEDISGRPS) would require some form of code translation or recoding to the statistical classification system used by the software. The DRG software, the Grouper, uses ICD-9-CM codes along with other UHDDS data elements to evaluate a record in order to assign it to a DRG. In September, 1983, a conversion program to translate selected ICD-9 and ICPM codes to ICD-9-CM was initiated by the research staff at the Naval School of Health Sciences. The conversion process was reviewed and found to reflect great potential for employing case mix analysis using the ICD-9-CM DRGs. However, it appeared to require additional testing and evaluation based on analysis of initial data processed using the ICD-9-CM Grouper (December, 1981 version). Development of the conversion program required consideration of additional consultation with expertise in nosology and the DRG scheme.

When this study began, it was not expected that the services would change coding conventions until the next revision of the ICD was released by WHO. The questions before us were: How effectively could these recoded data be utilized to describe MTF case mix? Would it be necessary for the AMEDD and DoD to use ICD-9-CM to gain access to accurate case complexity data?

4.2. Versions of the Map

The mapping process involved translating diagnosis and procedure codes from WHO's classifications, ICD-9 and ICPM to ICD-9-CM, published by the US Department of Health and Human Services. ICD-9 is a two-volume set; Volume 1 is the Tabular List, and Volume 2 the Index. ICPM is also a multiple volume classification, but only Volume 1 was used in the coding of procedures.

ICD-9-CM is a modification of ICD-9, created to serve as a tool in the area of classification of morbidity data for indexing of medical records, medical care review, and ambulatory and other medical care programs, as well as for basic health statistics. This classification provides more specificity in the codes to better describe the clinical picture of the patient.

The ICD-9 and ICD-9-CM classification systems are completely compatible at the three-digit level. ICD-9-CM, however, is different from ICD-9 at the fourth digit level in 28 rubrics, or categories. Since two of these rubrics were not used in Department of Defense coding (external cause of injury codes E849 and E850), 26 categories remain that are not equivalent at the four-digit level. More than half of these are injury codes (burns, skull fractures and intracranial injuries). At the fifth digit level, ICD-9-CM has many more codes than ICD-9.

In the modification of ICD-9 to ICD-9-CM, duplicate ICD-9 rubrics used for dual classification of basic disease etiology and manifestations were deleted. Manifestations were identified in most cases by a fifth-digit code added to the etiology rubrics. When this was not possible, the ICD-9 manifestation code was retained.

The procedure mapping was from ICPM to the procedure classification in Volume 3 of ICD-9-CM. The total number of procedures codes used by the AMEDD was 1,527. ICPM is published in a series of documents called fascicles, each containing a classification of modes of therapy, surgery, radiology, laboratory, and other diagnostic procedures. For AMEDD coding of procedures, the following portions of ICPM Volume I were used:

- Chapter 1 (Procedures for Medical Diagnosis) - selected codes only;
- Chapter 3 (Radiology and Certain Other Applications of Physics in Medicine) - selected codes only;
- Chapter 5 (Surgical Procedures) - all codes;
- Chapter 8 (Other Therapeutic Procedures) - all codes;
- Chapter 9 (Ancillary Procedures) - selected codes only.

The ICD-9-CM Volume 3 was a product of modification of WHO's Fascicle V. Approximately ninety percent of the rubrics refer to surgical procedures, while the remaining ten percent account for other investigative and therapeutic procedures. The structure of the ICD-9-CM classification is based on anatomy rather than on surgical specialty, which was the axis for ICPM. This structural difference was the major problem for the procedure mapping process.

By the end of 1983, it became apparent that substantial work was required on the ICD-9 and ICPM to ICD-9-CM map. Analysis of initial AMEDD DRG-grouped data using the Version I map obtained from the Naval School of Health Sciences showed 218 DRGs with zero frequency, and almost thirty thousand records that the Grouper was unable to group at all. Attempts were made to modify the map to correct errors and include more codes (Version II); it was recognized that there were no easy solutions or "quick fixes" that could be used. The job would require an in-depth code-by-code review.

Refinement of the conversion program became the top priority for the inpatient portion of the study effort. In March, 1984, the Health Care Studies and Clinical Investigation Activity (HCSCIA) contracted with CPHA to perform a series of comparative case mix analyses and to make comments and recommendations to improve the conversion of Army coded ICD-9 and ICPM data to ICD-9-CM. The comparative case mix report completed by CPHA is available from HCSCIA. The impact of the CPHA data and analyses are discussed and summarized in a separate report addressing case mix among AMEDD MTFs (CPHA, 1984). Table 4-1 presents a summary of the study conversion efforts and map versions.

4.3. Discussion of CPHA Mapping Recommendations

The nosological portion of the commission's report had two major parts. One was focused on a critical analysis of the then current mapping program used to create the ICD-9-CM data used by CPHA in development of a comparative case mix analysis report. This was an early version of the conversion program (refer to summary table for Version II). The other part, which was most useful, provided recommended modifications to the conversion program with code-by-code comments and discussion. The primary goal in converting the AMEDD biometric data was to achieve the most appropriate IPDS record assignment to the ICD-9-CM DRGs.

Table 4-1: SUMMARY OF CONVERSION ACTIONS

	M A P V E R S I O N S					
	I	II	III	IV	V	VI
ELEMENTS						
Diagnosis Codes changed		X	X	X	X	X
Procedure Codes changed		X	X		X	X
Forced Allocation *					X	X
Records Selection	1-4	1-4	1-4	1-4	1-4	1-4

LEGEND FOR RECORD SELECTION:

1. Excluded absent sick cases, Carded for record only (CROs), and records with incomplete clinical information.
2. Recoded age of infants.
3. Deleted procedures done at another hospital from procedure conversion process.
4. Patient age and type of disposition were recoded for the HSI grouper for all years.

SUMMARY OF MAP VERSIONS:

- I. Initial AMEDD map created from exception list received from Navy in September 83.
- II. Inclusion of AMEDD selected Obstetrical diagnoses and procedures.
- III. Inclusion of CPHA recommendations for procedures; also AMEDD derived diagnosis changes.
- IV. Inclusion of CPHA diagnosis recommendations with AMEDD modifications.
- V. Inclusion of Yale HSMG recommendations for diagnoses and procedures.
- VI. Yale recommendations from round # 2 for both procedures and diagnoses; also includes AMEDD resequencing of procedures.

* Records with diagnosis or procedure codes that could not be readily converted to the ICD-9-CM coding convention were assigned or "forced" into the appropriate Diagnosis Related Group. Refer to the section entitled "Discussion of translation problems" for specific coding details.

The senior nosologist for CPHA, Robert Seeman, provided consultation on the conversion process assessing the quality of the translation from ICD-9 and ICPM to ICD-9-CM (CPHA, 1984). The data CPHA analyzed involved the ICD-9 and ICPM codes as modified by the services. There are certain disease entities captured by the AMEDD and DoD that are unique to the general ICD-9 (1978) coding convention. On initial comparison, CPHA concluded that ICD-9-CM contained 35 percent more diagnosis codes (10,448 versus 7,757) than the DoD/AMEDD modified ICD-9. The nosology staff at CPHA was concerned about the translation task because of the problems inherent in moving from a less specific convention to a more specific convention. CPHA stated the problem as follows: "when one attempts translation from the source code structure with the fewer entities to the object code structure with the greater number of entities (1-to-N translation), the problem of achieving parity is magnified considerably" (p. 70).

To measure the effectiveness of translation, source data were taken from the Hospital Record Study, January through December, 1983, published by IMS America which is a collaborative project between IMS and CPHA. The Hospital Record Study data are a projected universe of disease and procedure incidence, based on short-term general acute care hospital discharges reported by CPHA to IMS from the data base collected by CPHA through its Professional Activities Study. The Hospital Record Study data base was presumed, for the purposes of the contractual analysis, to reflect the IPDS data base in order to determine the volume of occurrences of diseases and procedures involved in "mapping" or translation of IPDS data from ICD-9/ICPM with DoD/AMEDD modifications to ICD-9-CM. The CPHA analysis demonstrated the coding problems with the "map" using an aggregate reporting technique for each section or chapter within the ICD-9. Both conventions are compatible across the first three digits of each rubric in each convention. The CPHA developed their analysis using the following structure:

- a) Invalid 4th digit code
- b) Translation error
- c) Fifth digit 0 as acceptable valid choice
- d) Fifth digit 0 as a valid choice but not the best choice
- e) Fifth digit 0 as an invalid choice

The CPHA study produced useful data on how to modify the map as well as detailing those diagnoses which should be given careful consideration because they made a difference in MDC or DRG assignment. A deeper appreciation was gained of the global (data base) effect caused by forcing a zero into the fifth digit of the coding scheme resulting in inappropriate or non-existent code groups. These mapping recommendations were reviewed and considered in the context of the stage of development of the map at the time. The CPHA recommendations were furnished in parts. Their first recommendations were received in April, 1984 and addressed the procedure conversion, which resulted in another variation in the mapping criteria producing Version III of the AMEDD "map". The portion of their recommendations concerning diagnoses were received in August, 1984, and those changes were integrated into Version IV of the map.

4.4. Tri-Service Performance Measurement Conference

A Tri-service Performance Measurement Conference was sponsored by Health Services Command and The Army Surgeon General in New Braunfels, Texas, 11-15 June, 1984. The purpose of the conference was to develop an overview of current Tri-service initiatives in performance measurement and to demonstrate the current AMEDD productivity and case complexity concepts. The Tri-service Performance Measurement Conference established definite Tri-service support and commitment to additional work in evaluation of the contribution case mix analyses could make in enhancing workload and performance measures. As a result, we reestablished our goals to pursue further research on creating the "best" map. The possibility of intervening in service coding practices (i.e. Should we switch coding conventions to ICD-9-CM?) was surfaced as a firm recommendation on several occasions during the conference. At that time, it was not considered likely that the Office of the Assistant Secretary of Defense for Health Affairs (OASD-HA) or any collective service policy action was going to facilitate a change in coding convention moving from ICD-9 and ICPM to ICD-9-CM. However, based in large part on recommendation from this conference, a decision was made in early 1985 that the Department of Defense would change to ICD-9-CM coding effective 1 January 1986.

4.5. Yale (HSMG) and AMEDD PMS Cooperative Efforts

Yale researchers invited to speak at the conference indicated they were interested in continued involvement in our pursuit of the "best" map. Collaboration with the Health Systems Management Group (HSMG) researchers, within the School of Organization and Management at Yale University, began in January, 1984 when we learned of their development of international case mix analyses. Specifically, Fetter and Freeman (1984) were "mapping" French data between ICD-9 and ICD-9-CM while also reporting success assigning data from the hospital at Tilburg University in the Netherlands to DRGs. HSMG is still involved with several DRG-related projects abroad. Its interests in what other countries are doing regarding grouping related diagnoses stem from efforts to develop detailed cross-national (international) comparisons of hospital case mix and cost.

An initial map-sharing effort with HSMG staff began in February, 1984. The initial "map" we sent to Yale was a Version II map (see Appendix H for details of frequency). The initial conversion table received from Yale produced significant improvement to the DRG data base. We subsequently initiated an arrangement which has remained in effect throughout the project. This cooperative effort produced some of the most influential decision making for our ultimate conversion (Version VI).

HSMG had been source of research and development of the patient level classification system referred to as Diagnosis Related Groups. Thus, with their knowledge and background in the development of DRGs coupled with the cooperative attitude demonstrated by the staff in terms of their willingness to share the results of their conversion research on their international "mapping" effort, Jean Freeman, Ph.D., Research Scientist, HSMG, and Robert Mullin, M.D., Director of Continuing Care, Hospital of Saint Raphael, New Haven, Connecticut and Medical Director, Health Systems International, were invited to be the keynote speakers at the Tri-service conference.

The authors, together with the Navy statistician who developed the initial exceptions list and members of the HSMG staff, agreed to meet in late June at Yale to discuss further refinement of the conversion program. The coding details discussed during the meeting were very helpful in clarifying critical points of achieving an accurate DRG data base.

During the June, 1984 conference and the subsequent one (May, 1985), the general conduct of the meetings involved working from lists of codes where there were apparent differences. Prior to each meeting, HSMG and AMEDD Performance Measurement Study (PMS) staff prepared code-by-code lists citing which group had chosen which rubric-to-rubric translation. These lists of conversion differences served as the working agenda for each session. During the meetings, in cases where there were different translations, each code was discussed in open forum along the following lines:

- a) translation quality of the rubric (ICD-9 or ICPM) including title and description similarity (with ICD-9-CM);
- b) inclusions and exclusions specified in either ICD-9, ICPM or ICD-9-CM;
- c) frequency of occurrence of similarly coded data in the ICD-9-CM coded National Hospital Discharge Survey (NHDS) 1983 data set; and data from the CPHA and IMS America, jointly sponsored, Hospital Record Study.
- d) professional medical judgement for the disease entity;
- e) a classification/taxonomy perspective accounting for, as well as possible, coding vagaries as stipulated in coding rules and interpretations made by various national agencies.
- f) DRG nomenclature as detailed in the DRG Definition Manual and reflected in the DRG title/descriptor

In the fall of 1984, another map exchange occurred largely to effect a consolidation of the summer discussions. With new criteria for the conversion, new case mix and DRG data were produced and analyzed for accuracy of translation and compatibility with AMEDD data patterns. Case mix data were studied to determine the effect these code changes had on the complexity data at the MTF level and to determine how the facilities changed relative to each other using the Health Care Financing Administration (HCFA) relative weights published in September, 1983. Each map version provided the opportunity to examine new case mix data extensively. The medical treatment facilities responded differently as measured by the case mix index depending upon the volume of the translation modified rubrics present in the coded data for their facility.

We continued to produce DRG data for internal purposes. There were occasional exceptions in which studies, caveated as "preliminary" DRG data, were prepared for hospitals along with selected case complexity statistics requested by Office of The Surgeon General (OTSG) and HSC. In the process of investigating the data and examining the coding content of the DRGs we discovered a number of areas where there were discrepancies which needed resolution. As a result, we returned to HSMG for another round of code-by-code discussions to resolve conflicts and clarify interpretations. The conference provided sufficient changes to warrant creation of another version of the map, Version V.

4.6. Comparison of 1983 National Data with AMEDD FY83 Data

During the development of the AMEDD map it became apparent that we needed a national data base for comparative purposes. We decided to use the 1983 NHDS (data tape), compiled by the National Center for Health Statistics. The 1983 NHDS was chosen since it was the most recent national data set available on magnetic tape at that time. The NHDS encompasses patients discharged from short-stay hospitals, exclusive of military and Veterans Administration Hospitals, located in the 50 states and the District of Columbia. Only hospitals with six or more beds and an average length of stay of less than 30 days are included in the survey. The universe of the survey consisted of 6965 short-stay hospitals contained in the 1963 Master Facility Inventory of Hospitals and Institutions. In all, 553 hospitals were sampled in 1983. Four hundred eighteen hospitals actually participated providing approximately 206,000 abstracts of medical records, with weighting factors to approximate the universe of hospital discharges.

Figures 4-1 through 4-4 portray the distributions of the AMEDD and NHDS populations and comparisons between the two. The NHDS reports slightly more female than male hospitalizations (figure 4-1), while the AMEDD data showed the reverse (figure 4-2). The AMEDD distribution peaked with the 15-44 age groups for both male and female (see figures 4-3 and 4-4). The same was true for females in NHDS, but for males the age was distributed approximately equally over all the age groups, with the 65 and older age group showing a slightly higher percentage. The high 15-44 age group for AMEDD males illustrates the theory that the AMEDD population is different from the National population because of the active duty Army patient population.

Differences were also seen in the distributions of AMEDD and NHDS data by diagnosis. Table 4-2 shows the AMEDD data by ICD-9 diagnosis chapter, both for dispositions and bed days. Approximately forty-one percent of the hospitalizations are for diagnoses of factors influencing health status and contact with health services, complications of pregnancy, childbirth, and the puerperium, and diseases of the respiratory system. However, for utilization, the distribution is spread more evenly over the chapters, with several chapters showing approximately the same percentage of bed days.

Table 4-3 compares the distributions of AMEDD and NHDS data by ICD-9-CM diagnosis chapter. The largest percent of NHDS data fell into diseases of the circulatory system, complications of pregnancy, childbirth, and the puerperium, diseases of the digestive system, and factors influencing health status and contact with health services comprising approximately forty-six percent of the data. The AMEDD distribution changed only slightly from the originally coded ICD-9 data (table 4-2) and the converted ICD-9-CM data (table 4-3). There was a 0.17 percent shift from factors influencing health status and contact with health services to complications of pregnancy, childbirth, and the puerperium; all other chapters remained the same. Figure 4-5 shows the comparison of AMEDD and NHDS data by ICD-9-CM chapter.

Distributions of AMEDD and NHDS data were also compared by major diagnostic category (MDC). Again, a major portion of the data fell into the same MDCs, ie, Pregnancy, childbirth, and the puerperium, normal newborns and other neonates with certain conditions originating in the perinatal period, and diseases and disorders of the digestive system (see table 4-4 and figure 4-6). The major difference noted was NHDS had 10.9 percent of their data in MDC 5, diseases and disorders of the circulatory system, whereas in the AMEDD MDC 5 accounted for only 6.2 percent of the dispositions.

Figure 4-1: NHDS Distribution By Gender
CY1983 Inpatient Population

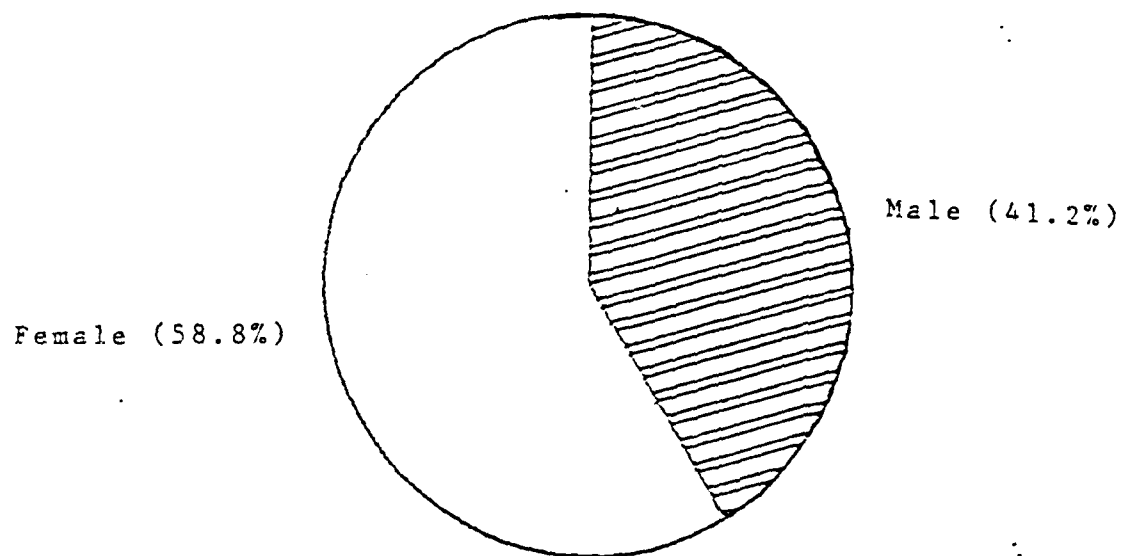


Figure 4-2: AMEDD Distribution By Gender
FY1983 Inpatient Population

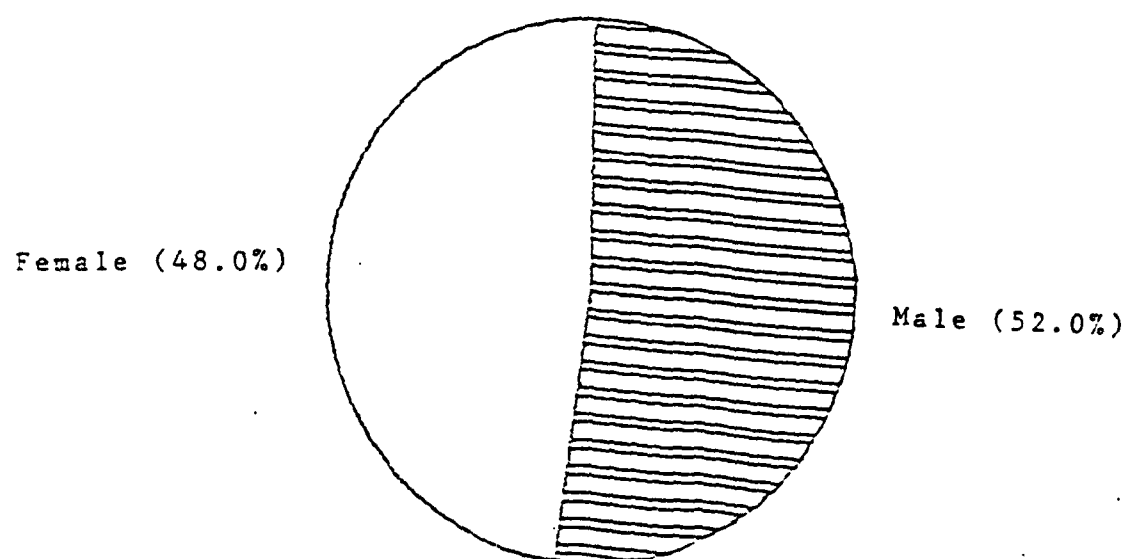


FIGURE 4-3: Distribution of Male Data by Age

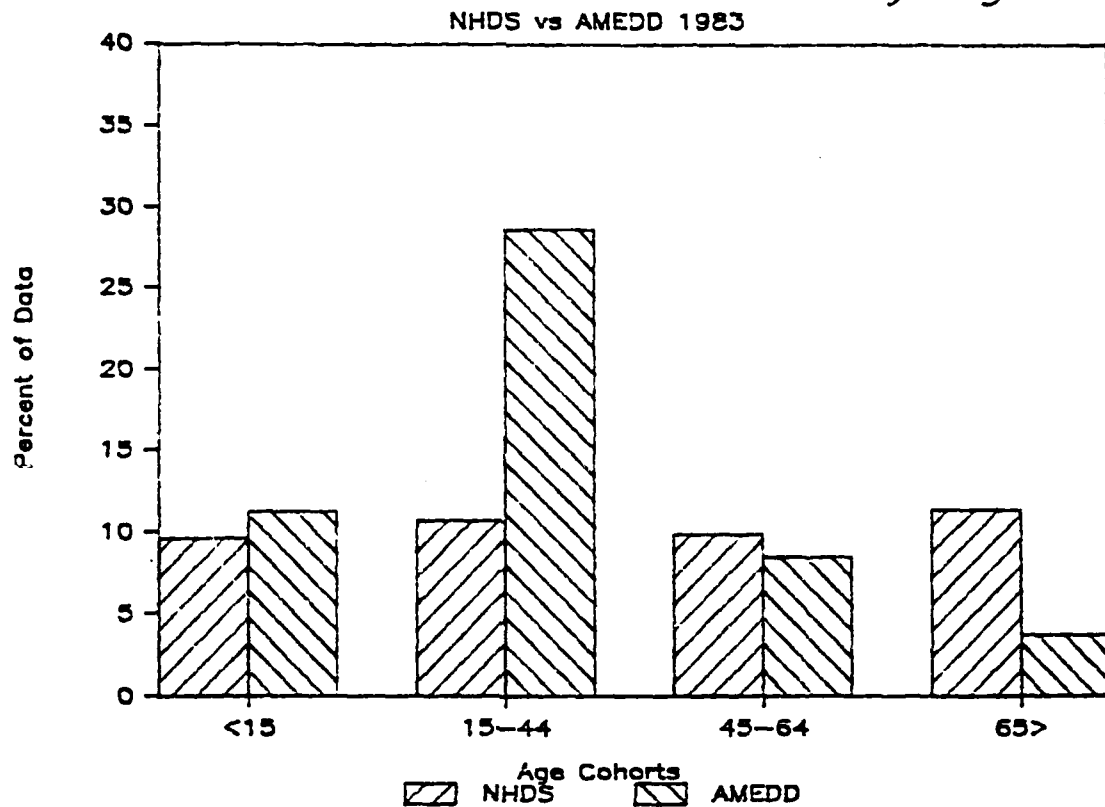


FIGURE 4-4: Distribution of Female Data by Age

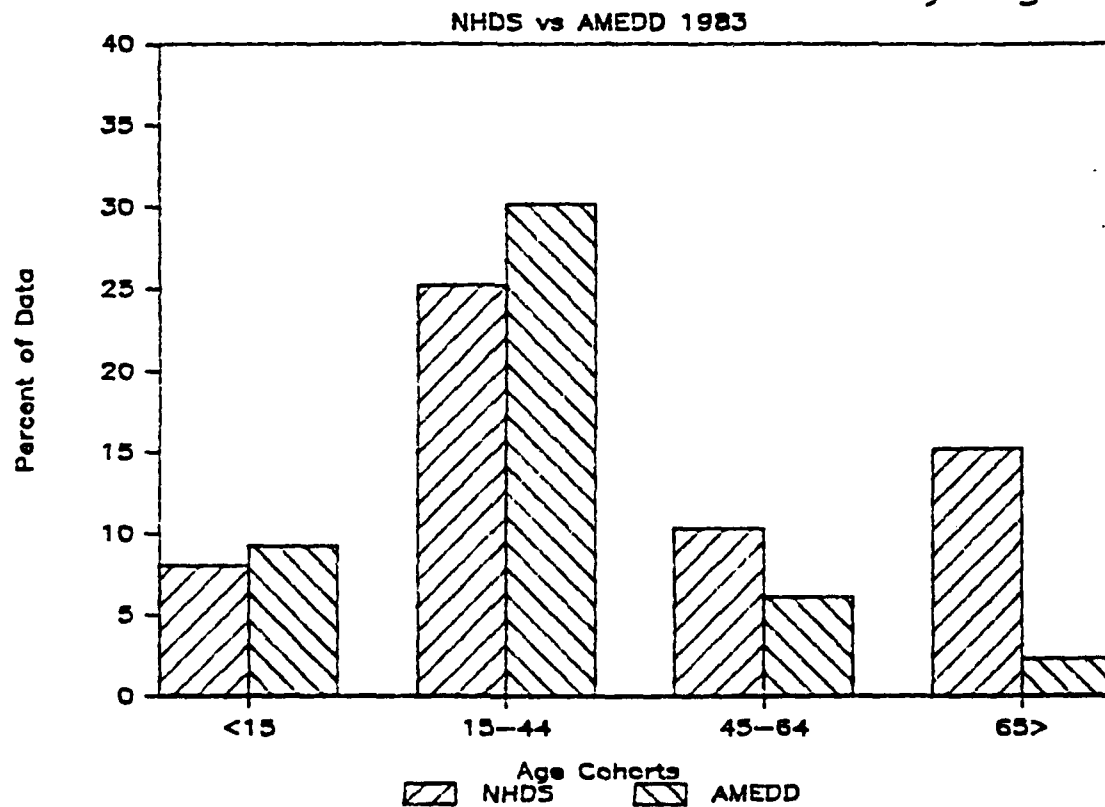


Table 4-2: DISTRIBUTION OF AMEDD ICD-9 DIAGNOSIS DATA

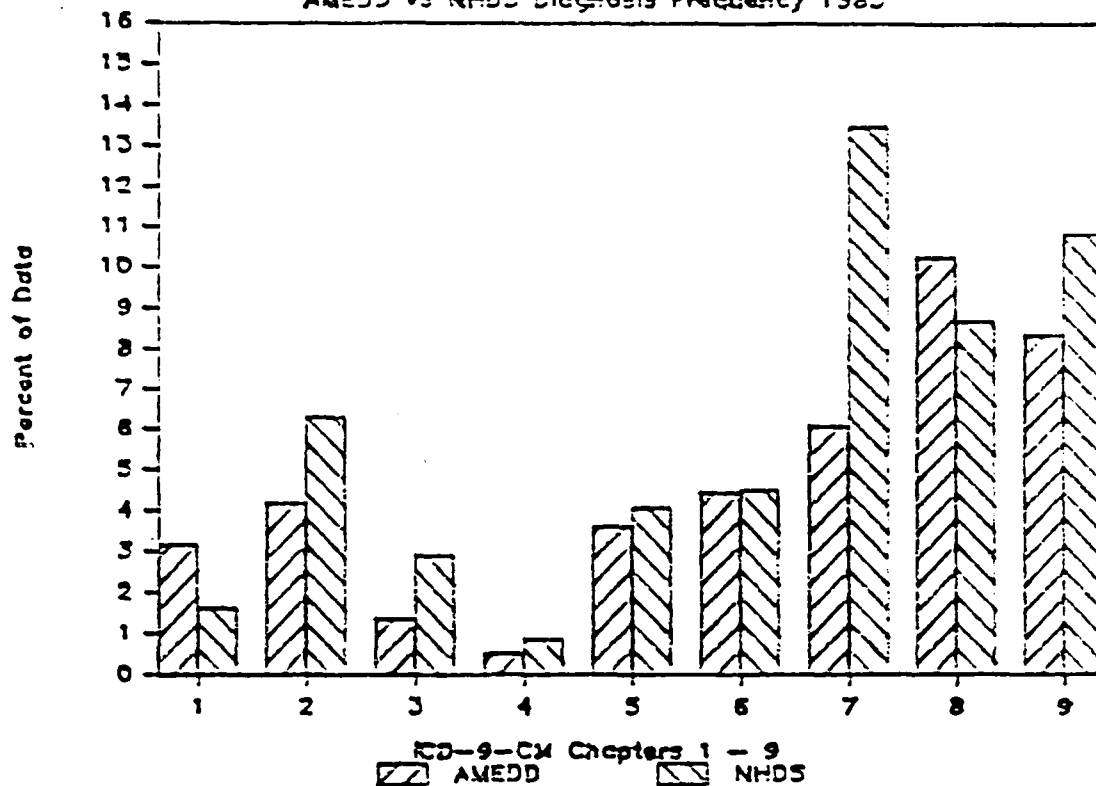
IPDS Data Base FY83 (Prior to Conversion)

CODES		FREQ	PERCENT	BED DAYS	PERCENT
001-139	INFECTIOUS AND PARASITIC DISEASES	12516	3.14	62451	2.54
140-239	NEOPLASMS	16569	4.16	200939	8.18
240-279	ENDOCRINE, NUTRITIONAL, & METABOLIC DISEASES & IMMUNITY DISORDERS	5410	1.36	49338	2.01
280-289	DISEASES OF BLOOD AND BLOOD-FORMING ORGANS	2112	0.53	13485	0.55
290-319	MENTAL DISORDERS	14303	3.59	229486	9.34
320-389	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	17505	4.39	90289	3.67
390-459	DISEASES OF THE CIRCULATORY SYSTEM	24155	6.06	213519	8.69
460-519	DISEASES OF THE RESPIRATORY SYSTEM	40733	10.22	162052	6.59
520-579	DISEASES OF THE DIGESTIVE SYSTEM	33147	8.32	199876	8.13
580-629	DISEASES OF THE GENITOURINARY SYSTEM	24965	6.26	126439	5.14
630-676	COMPLICATIONS OF PREGNANCY, CHILDBIRTH, & THE PUERPERIUM	58934	14.79	215900	8.78
680-709	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	7277	1.83	47912	1.95
710-739	DISEASES OF THE MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	22751	5.71	210999	8.59
740-759	CONGENITAL ANOMALIES	4063	1.02	26735	1.09
760-779	CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	817	0.20	5958	0.24
780-799	SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS	13343	3.35	62666	2.55
800-999	INJURIES AND POISONINGS	35800	8.98	296774	12.07
V01-V82	FACTORS INFLUENCING HEALTH STATUS AND CONTACT WITH HEALTH SERVICES	64168	16.10	242939	9.88
TOTAL		398568	100.00	2457757	100.00

Table 4-3: DISTRIBUTION OF ICD-9-CM DIAGNOSIS DATA
 AMEDD AND NHDS
 1983 DATA

CODES	TITLES	ICD-9-CM CHAPTERS	AMEDD PERCENT	NHDS PERCENT
001-139	INFECTIOUS AND PARASITIC DISEASES	1	3.14	1.59
140-239	NEOPLASMS	2	4.16	6.20
240-279	ENDOCRINE, NUTRITIONAL, & METABOLIC DISEASES & IMMUNITY DISORDERS	3	1.36	2.83
280-289	DISEASES OF BLOOD AND BLOOD-FORMING ORGANS	4	0.53	0.84
290-319	MENTAL DISORDERS	5	3.59	3.99
320-389	DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	6	4.39	4.41
390-459	DISEASES OF THE CIRCULATORY SYSTEM	7	6.06	13.26
460-519	DISEASES OF THE RESPIRATORY SYSTEM	8	10.22	8.52
520-579	DISEASES OF THE DIGESTIVE SYSTEM	9	8.32	10.63
580-629	DISEASES OF THE GENITOURINARY SYSTEM	10	6.26	7.77
630-676	COMPLICATIONS OF PREGNANCY, CHILDBIRTH, & THE PUERPERIUM	11	14.96	11.78
680-709	DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	12	1.83	1.35
710-739	DISEASES OF THE MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	13	5.71	5.71
740-759	CONGENITAL ANOMALIES	14	1.02	0.84
760-779	CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD	15	0.20	0.49
780-799	SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS	16	3.35	1.37
800-999	INJURIES AND POISONINGS	17	8.98	8.10
V01-V82	FACTORS INFLUENCING HEALTH STATUS AND CONTACT WITH HEALTH SVCS	18	15.93	10.29
			100.00	100.00

FIGURE 4-5: Comparison of ICD-9-CM Chapters
AMEDD vs NHDS Diagnosis Frequency 1983



Comparison of ICD-9-CM Chapters
AMEDD vs NHDS Diagnosis Frequency 1983

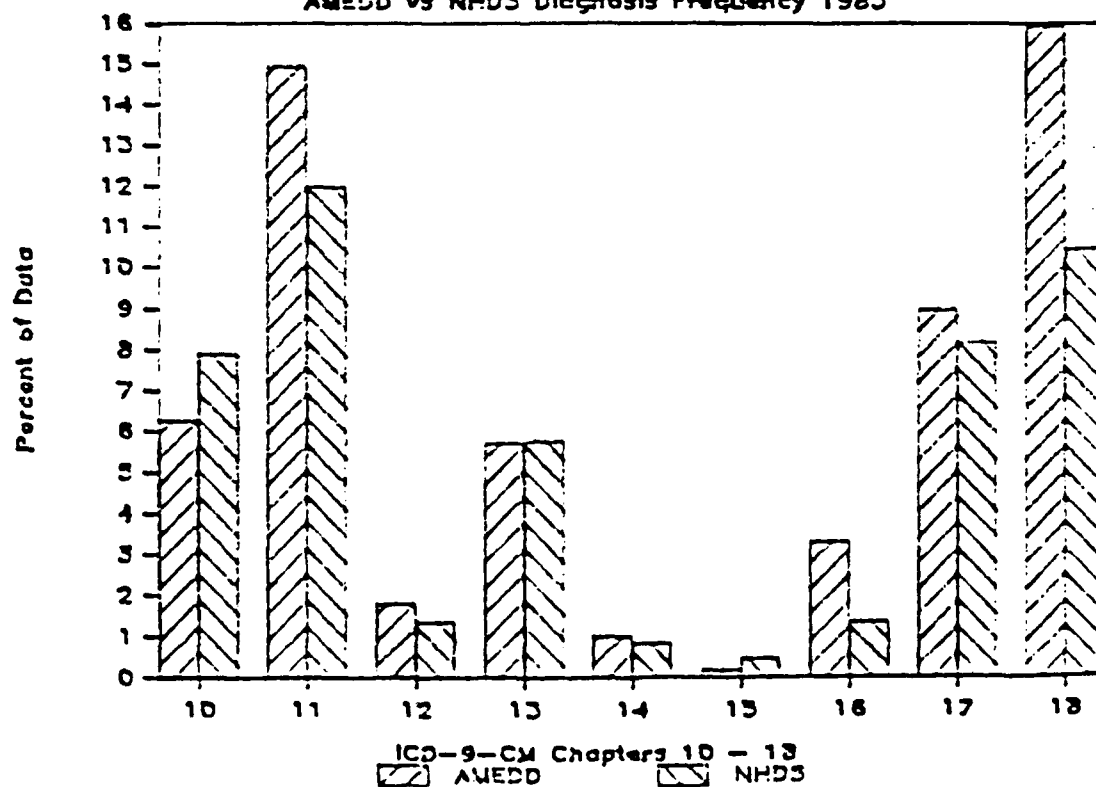
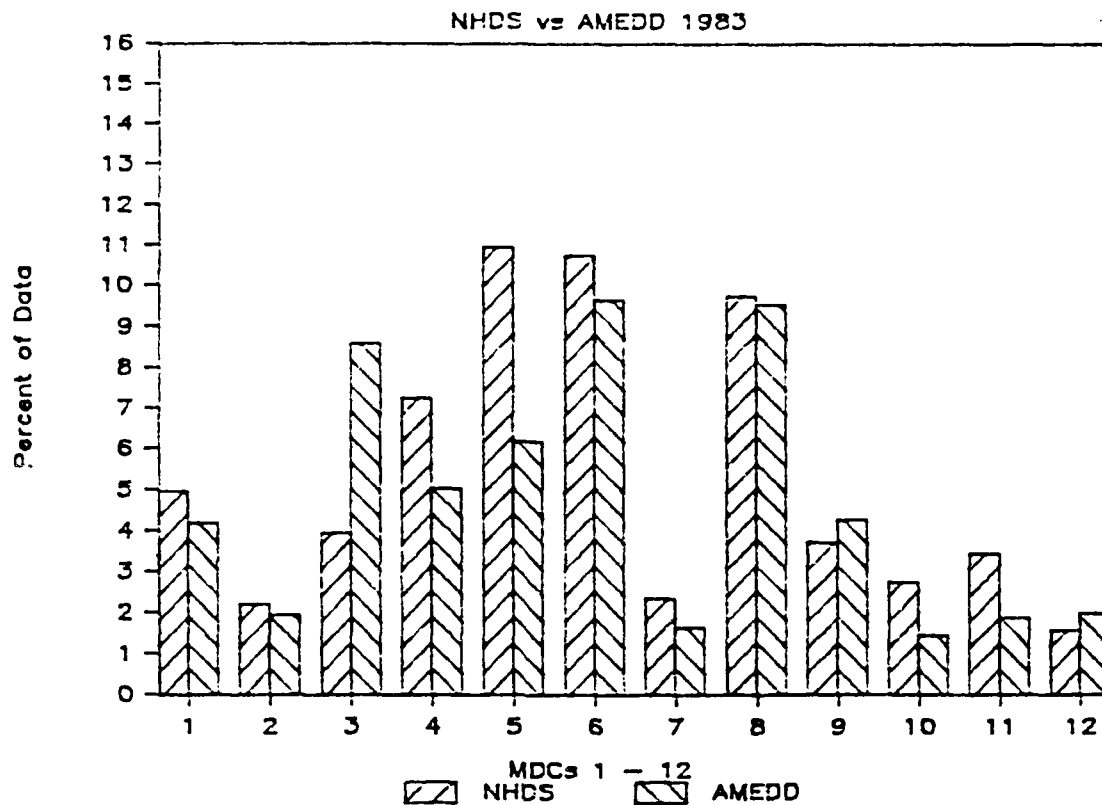


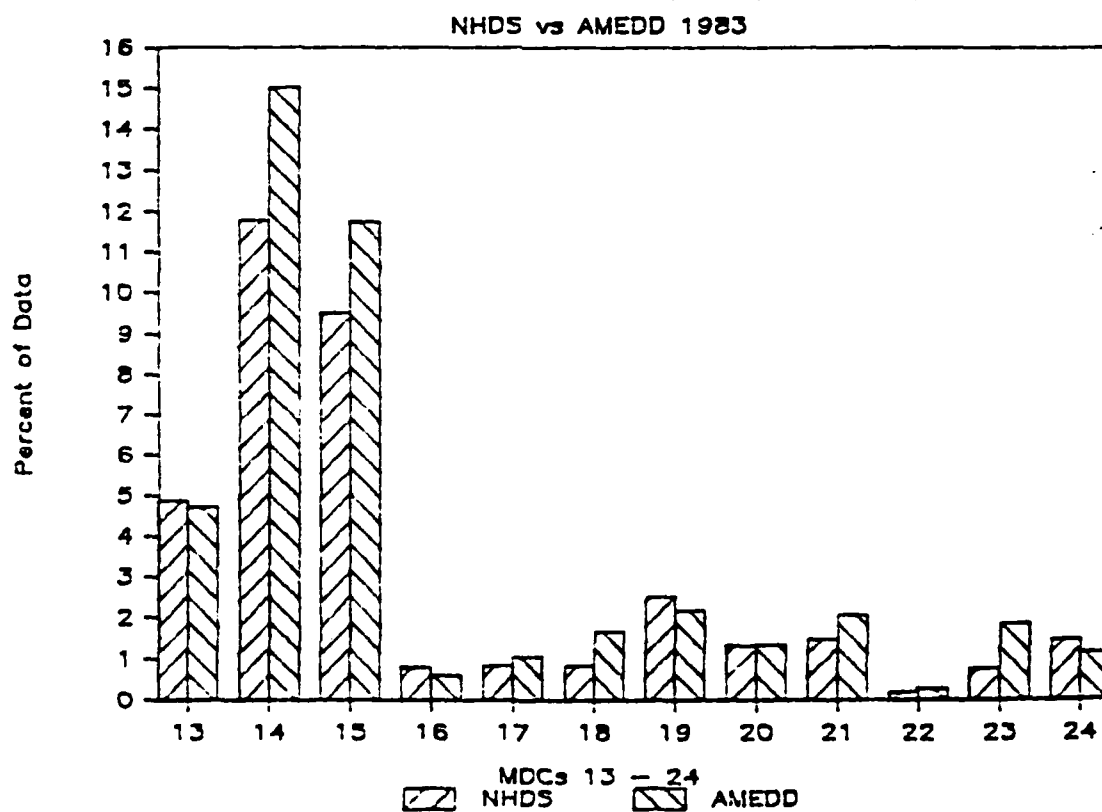
Table 4-4: COMPARISON BY MAJOR DIAGNOSTIC CATEGORY (MDC)
NHDS AND AMEDD 1983 DATA

MDC	DISPOSITIONS		PERCENT	
	NHDS	AMEDD	NHDS	AMEDD
MDC 1	2107138	16644	4.9	4.2
MDC 2	942991	7749	2.2	1.9
MDC 3	1678395	34230	3.9	8.6
MDC 4	3088371	20013	7.2	5.0
MDC 5	4656925	24693	10.9	6.2
MDC 6	4577750	38411	10.7	9.6
MDC 7	1005201	6548	2.4	1.6
MDC 8	4142976	37899	9.7	9.5
MDC 9	1580925	16971	3.7	4.3
MDC 10	1163017	5760	2.7	1.4
MDC 11	1460488	7458	3.4	1.9
MDC 12	665511	7860	1.6	2.0
MDC 13	2078689	18794	4.9	4.7
MDC 14	5018691	59883	11.8	15.0
MDC 15	4052330	46747	9.5	11.7
MDC 16	343321	2443	0.8	0.6
MDC 17	369364	4260	0.9	1.1
MDC 18	368372	6751	0.9	1.7
MDC 19	1076324	8698	2.5	2.2
MDC 20	569645	5424	1.3	1.4
MDC 21	636523	8281	1.5	2.1
MDC 22	83121	1072	0.2	0.3
MDC 23	324281	7379	0.8	1.9
MDC 24	620763	4600	1.5	1.2
TOTAL	42611112	398568	100	100

FIGURE 4-6: COMPARISON OF DATA BY MDCs



COMPARISON OF DATA BY MDCs



4.7. DoD and AMEDD Modifications to ICD-9 and ICPM Coding Classifications

Data requirements unique to the military services prompted additions and modifications to ICD-9 and ICPM when they were implemented for Department of Defense coding in 1980. Many of the added codes were lifted from ICD-9-CM, making the DoD ICD-9 coding more compatible with ICD-9-CM than other systems or countries which use the unmodified WHO ICD-9 version. Table 4-5 gives a chapter-by-chapter description of the modifications and additions. The two major areas of modification were the alcohol and drug codes in the mental disorders chapter, and the abortion, pregnancy, and delivery codes in the complications of pregnancy, childbirth, and the puerperium chapter. The abortion codes were expanded and modified to differentiate between elective and therapeutic abortions. In the pregnancy and delivery codes, a fifth digit was added, modeled after ICD-9-CM, to denote episode of care. In the drug and alcohol codes, the axes were changed to capture data regarding single versus multiple drug use, abuse versus dependence, and whether drug use was with or without alcohol.

Almost twenty percent of the FY83 AMEDD data used a DoD unique code as the principal diagnosis. The bulk of these data were in the pregnancy and delivery area, where the DoD unique codes were almost completely equivalent to ICD-9-CM. The DoD unique codes appearing in other chapters were generally ICD-9-CM equivalent, the major exception being the alcohol and drug codes in the mental disorders chapter. This particular group of codes was more specific than CM as discussed above, although they did not capture the usage as classified in CM, i.e., episodic, continuous, other or unspecified. In conversion, the additional specificity of these DoD unique codes was lost, and the unspecified CM fifth digit had to be used.

Another example of differences in DoD modified codes and ICD-9-CM is the viral hepatitis code. This is another instance where the classification axis was changed. The ICD-9 viral hepatitis rubric was built on the type of viral hepatitis and presence or absence of hepatic coma. In the DoD modification the axis was changed to denote type and laboratory (lab.) testing performed. In conversion, the lab testing information was lost, and since there was no information regarding coma, the types had to be converted to corresponding types without hepatic coma. It can be seen from these examples that code modifications inconsistent with existing structure create problems in data conversions.

Several other code categories were modified to record data required by the military services. In some cases ICD-9-CM subcategories could be used, such as injuries; in other cases such as viral hepatitis, a different axis was used. CPHA made some recommendations on DoD unique code conversions, but Yale HSMG had no particular interest in that area. The AMEDD and Yale HSMG maps, consequently, vary in the areas where there are DoD unique codes.

The initial version of the map involved translating only a few ICD-9 and ICPM codes which were known to differ from ICD-9-CM. This list of codes was called the "exceptions list," meaning that the codes on the list were not equivalent to ICD-9-CM codes without modification. The exceptions list served as a translation table in the software developed for conversion of data to ICD-9-CM, and came to be known as the "map". In the initial phase of conversion (map Version II), zeros were added to any ICD-9 diagnosis code not found in the exceptions list in an attempt to make an equivalent ICD-9-CM code. If ICPM procedure codes were not found on the exceptions list, they were not

Table 4-5: SYNOPSIS BY CHAPTER, DOD MODIFICATIONS TO ICD-9

AND FY83 MORBIDITY ASSOCIATED WITH DOD-UNIQUE CODES

ICD-9 CODE GROUP	NO. CODES ADDED OR MODIFIED	NO. CODES EQUAL TO ICD-9-CM	NO.DOD- UNIQUES MORE SPEC	PERCENT TOTAL DATA IN CODES MODIFIED
Infectious & parasitic diseases	21	8	8	0.20
Neoplasms	6	6	0	0.03
Endocrine, nutritional, meta- bolic, immunity disorders	0	0	0	-
Blood, blood-forming organs	5	5	0	0.07
Mental disorders	98	0	98	1.22
Nervous system, sense organs	19	18	1	0.04
Circulatory system	36	34	2	0.39
Respiratory system	10	9	1	1.22
Digestive system	17	17	0	1.69
Genitourinary system	3	3	0	0.01
Pregnancy, childbirth, puerperium	587	567	20	14.46
Skin, subcutaneous tissue disor	4	4	0	0.01
Musculoskeletal system, connective tissue	10	8	2	0.01
Congenital anomalies	0	0	0	-
Conditions in perinatal period	6	6	0	0.0
Symptoms, signs, ill-defined conditions	4	4	0	0.07
Injuries and poisonings	35	30	4	0.21
V-codes (health status)	5	0	5	-
TOTAL	866	719	141	19.60

converted at all. Since procedures usually done in an Operating Room, commonly defined as Class I procedures (UHDDS, 1978), are the ones that have an impact on DRG assignment, it did not seem necessary to convert any others. The first exceptions list contained only 94 diagnosis and 84 procedure codes.

Analysis of the initial converted data revealed serious conversion problems. Getting data from ICD-9 and ICPM into equivalent ICD-9-CM codes would require extensive research and resources, but it was a necessary prerequisite for obtaining valid data for DRG grouping. Since the credibility of development of measures of performance would certainly depend on valid data, development of the map had to precede other phases of the study.

Because of the lack of specificity in ICD-9 codes as compared to ICD-9-CM, it was frequently not possible to map to a code that was completely equivalent. In those cases, guidelines established at the beginning of the mapping process were followed. Since our ultimate goal was to group the data to DRGs, lack of specificity was not a major problem in areas where most codes equivalent to the fourth digit level fell into the same DRG. There were a total of 189 ICD-9-CM codes (excluding pregnancy and delivery codes) that fell into different DRGs according to the fifth digit; the majority of these were in the Poisonings and Injuries, and the Infective and Parasitic Diseases Chapter. However, when looking at the frequency of data in those codes in the National Hospital Discharge Survey, only 0.6 percent of the data were in these codes. A summary of the ICD-9-CM codes that fall into different DRGs depending on the fifth digit appears in Table 4-6.

There were differences in recommendations for conversion between our PMS study group, CPHA and Yale HSMG, and these were more apparent in the procedures map than in the diagnosis map. The conversion philosophy was somewhat different. When no equivalent codes were available to map to, subjective decisions had to be made. CPHA selected codes that influenced assignment of records to surgical DRGs, whereas Yale HSMG decisions tended toward the non-surgical, or medical, DRGs. The AMEDD PMS tended to seek nonspecific medical or surgical decisions depending upon the case. The more conservative philosophy used by Yale was found to be the most effective for our purposes and was the philosophy most consistently followed in the final versions of the AMEDD map. As soon as FY86 data are available, this philosophy can be further assessed by examination of data actually coded into ICD-9-CM rather than converted data. A comparison or validation study will be conducted between the originally coded ICD-9-CM data and the converted data base assessing the patterns by code, chapter, MDC and DRG.

4.8. Discussion of Translation Problems

The major translation problems encountered were:

- a) Lack of specificity for equivalent code translation.
- b) Differences in the axis of classification between ICPM and ICD-9-CM.

Because of the lack of detailed terminology in many ICD-9 codes, it was not possible to map to some of the more specific ICD-9-CM codes. The frequency of some DRGs is diminished or eliminated completely because of this. (See Table 4-7 for a list of codes having no frequency.) Similarly, poor code translation necessitated the application of "forced allocation" causing the frequencies of some of the "unspecified" DRGs to be inflated.

Table 4-6: CHAPTER BY CHAPTER SUMMARY OF ICD-9-CM CODES
IN WHICH DRG ASSIGNMENT IS DEPENDENT UPON THE
FIFTH DIGIT OF THE RUBRIC, AND PERCENT OF DATA IN NHDS *

ICD-9-CM CHAPTER	NO. OF CODES	NO. OF CODES WITH NHDS DATA	PERCENT OF TOTAL NHDS DATA
Infective & parasitic diseases	28	10	0.01
Neoplasms	2	1	0.01
Endocrine, nutritional, & metabolic diseases & immunity disorders	2	0	0.00
Mental disorders	7	6	0.05
Diseases of the nervous system & sense organs	28	11	0.04
Diseases of the circulatory system	7	3	0.00
Diseases of the skin and subcutaneous tissue	2	1	0.00
Diseases of the musculoskeletal system and connective tissue	8	5	0.11
Congenital anomalies	8	6	0.04
Symptoms, signs, & ill-defined conditions	4	3	0.04
Injury and poisoning	89	48	0.33
TOTAL	189	94	0.63

* Based upon assignments of the June, 1983 Health Systems International Grouper software and The Revised ICD-9-CM Diagnosis Related Groups (DRG) Definition Manual.

Table 4-7: DRGs NOT ALLOCATED

Version VI Conversion Program *

DRG	MDC	TYPE	TITLE
27	001	M	TRAUMATIC STUPOR + COMA, COMA>1 HR
50	003	S	SIALOADENECTOMY
210	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >69 AND/OR C. C.
211	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 18-69 W/O C. C.
212	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17
230	008	S	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES OF HIP + FEMUR

* These DRGs could not be allocated in any Year group data because of the nature of the ICD-9 and/or ICPM source code. This table is not the same as a table reflecting zero frequency due to no morbidity for the category or categories named.

For example, the codes for skull fracture in ICD-9 do not include any information regarding state of consciousness. In the ICD-9-CM codes, a fifth digit specifies state of consciousness in great detail. In the mapping from ICD-9, the codes for skull fracture were mapped to the ICD-9-CM fifth digit 0, unspecified state of consciousness. This made it impossible for any records to fall into DRG 27, Traumatic stupor and coma, coma greater than one hour.

The lack of equality in ICPM and ICD-9-CM procedure codes had a great influence on surgical DRG assignment. Since ICPM is created on the axis of clinical specialty (categorized by biopsies, fracture reductions, etc.), it was difficult and many times impossible to find equivalence with ICD-9-CM codes, a classification based on anatomical axes. Translations were to the "best" available codes, recognizing some inadequacies in comparability.

A good example of the procedure mapping problem can be shown by looking at DRGs 210 through 212, Hip and femur procedures except major joint (subdivided by age group). None of the surgical procedures included in these DRGs appear in the map to ICD-9-CM; therefore, all three DRGs have a zero frequency or could not be allocated. In ICD-9-CM the sites of procedures are identified by a fourth digit in most of the bone and joint procedure categories, i.e., femur is represented by the fourth digit 5. However, in ICPM many times the joints are combined into codes where it is impossible to determine specific joints. Sites were identifiable on some of the major joint procedures, and those were grouped to DRG 209. However, DRG 209 is probably deflated, since there are other codes that possibly represent major joint procedures. For example, ICD-9-CM codes 8141 and 8148, Total knee and Total ankle replacement, were missing from the map, since ICPM does not have specific categories for each of these. Instead, those procedures would have been included in the repair and plastic operations on joint structures (rubrics 5811 and 5814), which would also include additional procedures other than replacement. Conversely, DRGs 218-220 would be inflated because of the decision to map the 581 category of ICPM codes to fusion and repair procedures.

Reattachment of foot is another code included in the grouping for DRG 209. However, in ICPM reattachment of foot and toes are combined into one code. Since it was believed that toe reattachment procedures were done more frequently than foot reattachments, the code 5853 was mapped to the toe reattachment code 8425, which falls into DRG 225, foot procedures.

Other DRGs having zero frequency were DRGs 50, Sialoadenectomy; 103, Heart Transplant; and 230, Local excision and removal of internal fixation devices of hip and femur. DRG 103 was a true zero frequency and not a result of mapping, since no open heart surgeries had been done in AMEDD hospitals. The other two, however, were not possible to get to because of the procedure map. In ICPM sialoadenectomy is included with other conditions in code 5260, Incision of salivary gland or duct, which was mapped to 260, Incision of salivary gland or duct. The other DRG with zero frequency, 230, was also impossible to get to because of mapping problems. The ICPM code for removal of internal fixation appliance (5788) was not site specific, and was mapped to 7860, Removal of internal fixation device, unspecified site.

5. APPLICATION OF CONVERTED DATA

As a whole the map may be considered a very effective and reliable tool for conversion of data coded in ICD-9 and ICPM to ICD-9-CM. It is recommended that the map be used as a reference or "starting point" in retrieving data for specific diseases, since some codes in the map are not equivalent but are the "best approximations". However, for summary data, by either a three or four digit code, the map will give very comparable data.

5.1. Limitations of the Map

Although AMEDD converted data will be very useful in development of performance measures and trend analyses, there are inherent limitations for using the conversion map which should be considered:

- a) Not every code is mapped to in ICD-9-CM.
- b) In some cases, conversion lost specificity.
- c) Unspecified categories will tend to be slightly inflated in converted data, whereas more specific categories will be slightly deflated.
- d) Procedure map is not as strong as diagnosis map, since many more subjective choices had to be made in unequal code assignments.
- e) The map from ICD-9 and ICPM should not be used in reverse, that is, from ICD-9-CM to ICD-9 and ICPM. In cases where a single ICD-9 code was expanded to several subcategories in ICD-9-CM, using the map in reverse would map only one of the ICD-9-CM subcategories back to ICD-9; the same is true for ICPM.
- f) The map is stronger in some chapters than others; for example, the pregnancy and delivery chapter is very strong, but the mental disorders chapter has more differences in the two classifications considering the DoD unique codes.

5.2. Unique Obstetrical Code Choices

One group of records carried the V230-V239 diagnosis code, Supervision of high risk pregnancy, which is not considered a valid principal diagnosis by the Grouper Program. These records were grouping to DRG 469, Invalid principal diagnosis. Recoding these to 64633, Habitual aborter, antepartum condition or complication, forced them into DRG 382, thus "fixing" the problem in the data. The policy of admitting patients for supervision of high-risk pregnancy illustrates the uniqueness of military hospitals. It is sometimes appropriate to admit these patients when they live considerable distances from military hospitals, especially in overseas areas, or if they are active duty patients. For the period FY81 thru December, FY82, DoD had not yet begun to code their OB/GYN diagnoses using the ICD-9-CM fifth digits. Data for these periods that did not group correctly, were forced into DRGs using the following process:

- a. If record had a cesarean section procedure coded (740-742, 744, or 749) they were assigned to DRG 371, Cesarean section w/o cc.

b. If principal diagnosis was Ectopic pregnancy (633), record was assigned to DRG 378, Ectopic pregnancy.

c. If principal diagnosis was Abortion (634-636), record was assigned to DRG 380, Abortion w/o D+C.

d. If principal diagnosis was Complication following abortion, ectopic or molar pregnancies, and failed attempted abortion (637-639), record was assigned to DRG 376, Postpartum diagnosis w/o OR procedure.

e. If principal diagnosis was Early or threatened labor (644), record was assigned to DRG 382, false labor.

f. If principal diagnosis was a complication mainly related to pregnancy (640-648), record was grouped to DRG 383, Other antepartum diagnoses with medical complications.

g. All remaining OB/GYN records were assigned to DRG 373, Vaginal delivery w/o complicating diagnoses.

Because of the way the OB/GYN data were forced (33,913 records for FY81, 8,831 for FY82) it is recommended that OB/GYN data for FY81 and FY82 be used with caution.

5.3. Unencountered Rubrics in Converted Data Base

To get an idea of how the AMEDD converted data compared to data originally coded into ICD-9-CM, a chapter-by-chapter analysis was made with the NHDS data for 1983 (see table 5-1). It was learned that there were only 4,149 ICD-9-CM codes that did not appear in the conversion map from ICD-9, and of these, only 1,023 contained data in the NHDS 1983 data. By applying appropriate weighting factors to the NHDS sample data, approximately 42,000,000 dispositions were represented in the sample. The dispositions for the unmatched ICD-9-CM codes were 2,600,000 or 6.09 percent of the NHDS data. The average length of stay for the dispositions having unmatched codes was 7.85, accounting for approximately 20,500,000 bed days, or 7.33 percent of the NHDS bed days. The largest percentage of unmatched codes fell in the Injury and Poisoning categories (ICD-9-CM codes 800-999). The next largest percentage was for codes pertaining to diseases of the circulatory system. Each category is discussed below in the order of highest frequencies of unused CM codes in NHDS data.

5.3.1. INJURIES AND POISONINGS

Injury and poisoning categories (ICD-9-CM codes 800-999) contained 1.62 percent (690,600) of all NHDS dispositions, or more than one-fourth of all dispositions that fell in the unused ICD-9-CM categories. Fractures accounted for the major portion of these. In Fractures to the neck of the femur for example, choices had to be made in several categories when there was not enough specificity in the ICD-9 code to make an equivalent translation. The code 8202, Pertrochanteric fracture, closed was mapped to 82020, Pertrochanteric fracture, closed, trochanteric section unspecified, because this was the most equivalent code given the information available. The largest proportion of the NHDS data for that category, however, was coded to 82021, Intertrochanteric section.

Table 5-1: SUMMARY OF NHDS DIAGNOSIS DATA NOT ENCOUNTERED
IN AMEDD CONVERSION FROM ICD-9 TO ICD-9-CM

MAJOR AREA	PERCENT
a. INJURIES AND POISONINGS	1.62
b. DISEASES OF THE CIRCULATORY SYSTEM	1.14
c. MENTAL DISORDERS	0.75
d. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, THE PUERPERIUM	0.74
e. DISEASES OF THE MUSCULOSKELETAL SYSTEM, CONNECTIVE TISSUE	0.58
f. DISEASES OF THE DIGESTIVE SYSTEM	0.31
g. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	0.26
h. NEOPLASMS	0.17
i. CONGENITAL ANOMALIES	0.15
j. DISEASES OF THE BLOOD AND BLOOD FORMING ORGANS	0.09
k. DISEASES OF THE GENITOURINARY SYSTEM	0.07
l. DISEASES OF THE RESPIRATORY SYSTEM	0.05
m. SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS	0.05
n. SUPPLEMENTARY CLASSIFICATION OF FACTORS INFLUENCING HEALTH STATUS AND CONTACT WITH HEALTH SERVICES	0.05
o. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE	0.03
p. INFECTIOUS AND PARASITIC DISEASES	0.02
q. ENDOCRINE, NUTRITIONAL, METABOLIC DISEASES, IMMUNITY DISORDERS	0.02
r. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD	0.01
TOTAL	6.09

The same was true with the 8200 category, Fracture of neck of femur, transcervical fracture, closed. This was mapped to 82000, Fracture of femur neck, intracapsular, unspecified, since there was insufficient information to map to a more specific site. The preponderance of data in the NHDS for the 8200 category fell into 82009, Other transcervical fracture. HSMG, Yale University agreed with this selection. Similar problems were encountered in Fractures of limbs, vertebrae, and skull. Unused concussion and intracranial injury codes accounted for more than 60,000 dispositions. The largest single code in this group was 85409, Intracranial injury of other and unspecified nature without mention of open intracranial wound, with concussion, unspecified. Since ICD-9 provided no information regarding loss of consciousness, the 0 fifth digit "unspecified" was selected for all the 851-854 codes, realizing that this selection would tend to influence DRG assignment to less costly DRGs, but preferring to be conservative in the code selection. Again, we were in concert with the Yale University Health Services Management Group in this decision.

Fractures are just one example of the problems encountered when attempting to translate codes from one classification to a more specific classification. Within codes which generally have heavy traffic, as in the case of fractures, the problem is magnified.

5.3.2. DISEASES OF THE CIRCULATORY SYSTEM

Frequency of the National Hospital Discharge Survey dispositions for CM codes not used in this chapter of ICD-9-CM (codes 390-459) is 486,300, or 1.14 percent of all NHDS dispositions. This is the second major area of data absence, particularly in the myocardial infarction codes. Acute myocardial infarction is only a 3-digit code in ICD-9 (410). Since the ICD-9-CM codes for acute myocardial infarction are site specific, the unspecified site was the selection for the CM code to map to. In the NHDS data, this code contained 320,900 dispositions in contrast to 126,200 for Acute myocardial infarction of other inferior wall (4104), 97,400 for Acute myocardial infarction of other anterior wall, or 75,000 for Subendocardial infarction (4107).

Category 411 is also a 3-digit code in ICD-9 and is broken out in ICD-9-CM on a syndrome axis for the fourth digit. The code to which we mapped is 4111 (Intermediate coronary syndrome), since our physician consultants felt this was the more prevalent diagnosis in the 411 rubric. This selection was confirmed by the traffic in the National Hospital Discharge Survey data. There were 130,600 dispositions in the 4111 category compared to 1,500 in 4110 (Postmyocardial infarction syndrome) and 74,600 in 4118 (Other).

5.3.3. MENTAL DISORDERS

Unused ICD-9-CM codes in this chapter (290-319) accounted for 317,800 dispositions in the NHDS data, or 0.75 percent of the NHDS dispositions. The unused code within this chapter that had the highest frequency was 30300, Acute alcoholic intoxication, unspecified. This area of codes presented mapping problems unique to The Department of Defense as a consequence of DoD ICD-9 modifications. In the 303 rubric (Alcohol dependence syndrome) DoD had expanded to seven codes: 30300-30302 for Alcohol dependence syndrome; 30310-30312 for Alcohol dependence with drug abuse, and 3032, Late effects of alcohol.

There still would have been a problem in mapping the ICD-9 code to ICD-9-CM without the addition of these codes. In ICD-9 the Acute alcoholic

intoxication and Other and unspecified alcoholic dependence are combined into one category. Another DoD code modification that influenced the mapping of ICD-9 code 303 was the addition to another category (305) of 3054, Alcohol, nondependent abuse, which would be more comparable to the CM category title for 3030, Acute alcoholic intoxication. However, that category is under the rubric for alcohol dependence rather than abuse.

Since it was felt that for DoD data the 303 category would contain alcohol dependence patients and the 3054 would contain alcohol abuse, 30309 was the code selected for mapping from ICD-9, leaving the 30300 code unused.

The other two unused CM codes in the mental disorders having high frequency counts were 29630, Major depressive disorder, recurrent episode, unspecified degree (with a NHDS frequency of 34,900) and 29562, Residual schizophrenia, chronic state (NHDS frequency of 30,600). The Manic-depressive psychosis, depressed type rubric (ICD-9 code 2961) was broken out into two categories in ICD-9-CM using a slightly different axis, and with a fifth digit denoting episode (single or recurrent). Again being conservative in translation, 2961 was mapped to 29620 (single episode), using the 0 fifth digit to denote severity or remission unspecified. The NHDS data reported 114,500 dispositions in the code selected in map (29620) versus 34,800 for the category not selected for mapping.

In the mapping of 2956, Residual schizophrenia, the choice was also to map to a chronic, subchronic, or unspecified disorder with or without exacerbation. Because of the sensitivity of a diagnosis in this category, it was again felt the more conservative choice would be preferable, and the unspecified fifth digit was chosen for mapping. In this case, however, the preponderance of the NHDS data was in the "chronic" fifth digit, i.e., 30,600 dispositions in the 29562 category compared to 1,400 dispositions in category 29560.

5.3.4. COMPLICATIONS OF PREGNANCY, CHILDBIRTH, PUERPERIUM

Approximately 313,600 dispositions in the NHDS were coded with a primary diagnosis falling in the complications of pregnancy, childbirth, and puerperium group of codes (630-676) but not used in the ICD-9 conversion map. However, three ICD-9-CM codes account for most of these dispositions. The highest frequency was for ICD-9-CM code 63791, Unspecified abortion, incomplete, without mention of complication. The uniqueness of military service biometric data is illustrated by this code since coding principles require that abortion type be specified. In fact, the ICD-9 637 category has been changed from Unspecified abortion to collect data on Admissions for complications following abortion not performed or treated at the reporting hospital. All data for abortions performed in military medical systems would be coded using ICD-9 codes 634 (Spontaneous abortion), 635 (Legally induced abortion), or, if admitted for complication following abortion in a military hospital, code 639. For this reason, ICD-9-CM code 63791 is unused in the map from ICD-9 to ICD-9-CM.

The second highest frequency of unused ICD-9-CM codes in this chapter is ICD-9-CM 64403, Threatened premature labor, antepartum. One code in ICD-9, 64403 (Threatened Labor) is divided into two codes in ICD-9-CM- 64403, Threatened premature labor, and 6441, Other threatened labor. The code selection for the map was 64413, and the volume of traffic in the two codes substantiates this choice as the better one for the majority of records. (The volume of dispositions coded 64403 in NHDS was 64,800 compared to 112,000 for 64413.)

The third ICD-9-CM code not included in the diagnosis map and accounting for data on the NHDS tape was 63490, Spontaneous abortion, unspecified, stage unspecified. Since ICD-9 did not have the specificity to code stage, the fifth digit 1 was chosen to map to from 6349 based on NHDS data (32,300 coded to fifth digit 1 versus 17,900 to fifth digit 0 and 6,300 to fifth digit 2). This translation choice is in conflict with Yale University's map; HSMG elected to map to the 0 fifth digit.

5.3.5. MUSCULOSKELETAL SYSTEM, CONNECTIVE TISSUE DISEASES

From the musculoskeletal and connective tissue disease chapter (codes 710-739), the ICD-9 category 7339, Other and unspecified disorders of bone and cartilage, is broken out by site at the fifth digit level; 73399 is the code for Other and unspecified diseases of bone and cartilage, multiple sites. The ICD-9-CM coding structure for 7339 is different from ICD-9 in that the fifth digit is used to classify specific bone and cartilage disorders. The fifth digit 0, Unspecified disorder of bone and cartilage, was selected to map all the sites to in the ICD-9 rubric 7339. The 73390 category had a lower frequency count than 73399 in the NHDS data (12,000 dispositions compared to 33,000); however, the translation is more equivalent using the information given. Yale HSMG concurred with this translation.

Although fifth digits are given for some musculoskeletal codes in ICD-9, only four digits are used for the 7229 category, Intervertebral disc disorders, other and unspecified. The NHDS data tape reported 15,600 dispositions for 72291, Other and unspecified disc disorders, cervical region, and 48,800 for dispositions in 72293, Lumbar region, with only 7,200 for 72290, Unspecified region. Although this frequency was low compared to the others, it was felt that for an unspecified subcategory of an unspecified category, it was better to map to the unspecified subcategory in the target classification.

5.3.6. DISEASES OF THE DIGESTIVE SYSTEM

In the digestive system diseases chapter (ICD-9-CM codes 520-579), two ICD-9-CM codes that were not mapped from ICD-9 accounted for most of the dispositions. These were 56039, Other impaction of intestine, and 55320, Unspecified ventral hernia. The frequency of these combined, however, was inconsequential (0.1 percent of total NHDS discharges).

5.3.7. DISEASES OF THE NERVOUS SYSTEM, SENSE ORGANS

Although many codes in the nervous system and sense organ chapter (codes 320-389) were not represented in the ICD-9 to ICD-9-CM map, most of these had zero or a very small frequency and represented only about one-fourth of one percent of the NHDS data. The largest frequency was for 37434, Blepharochalasis. The ICD-9 code 3743, Ptosis of eyelid, was mapped to 37430, Ptosis of eyelid, unspecified.

5.3.8. NEOPLASMS

One code in the Neoplasm chapter (ICD-9-CM codes 140-239) that was not mapped to had a noticeable frequency. This was 2141, Lipoma of other skin and subcutaneous tissue. The ICD-9 code 214, Lipoma, was mapped to 2149, Lipoma of unspecified site. The frequency for 2141 in NHDS data was 38,500 discharges, or about 0.1 percent of all NHDS data.

5.3.9. CONGENITAL ANOMALIES

Only about 0.15 percent of the NHDS data fell into codes not represented in the congenital anomalies chapter (codes 740-759) of the map. These frequencies were scattered over many codes; no specific mapping problems were noted.

5.3.10. DISEASES OF BLOOD AND BLOOD-FORMING ORGANS

There was only one code in this chapter (codes 280-289) that represented any frequency in the NHDS data that did not appear in the map. Iron deficiency anemia secondary to blood loss, chronic (ICD-9-CM code 2800) had frequency of 35,700, representing 0.08 percent of NHDS dispositions. The ICD-9 code 280, Iron deficiency anemias, was mapped to ICD-9-CM code 2809, Iron deficiency anemia, unspecified, which was more equivalent in code description and also had a slightly higher frequency in NHDS data.

5.3.11. DISEASES OF THE GENITOURINARY SYSTEM

Two ICD-9-CM codes in the genitourinary system chapter (codes 580-629) that were not mapped to, yet had some frequencies in NHDS data, were 60499, Other orchitis, epididymitis, and epididymo-orchitis, without mention of abscess, and 60784, Impotence of organic origin. The ICD-9 code 6049 was mapped to 60490, Orchitis and epididymitis, unspecified. Not only was this more equivalent in code translation, but the frequency in the NHDS data for 60490 was double that for 60499. Other disorders of penis, ICD-9 code 6078, was mapped to 60789, Other specified disorders of penis. While this code does not contain the largest frequency of NHDS data for that category, it is the more equivalent translation. Since only 0.07 percent of the entire NHDS data were unrepresented in the map for the genitourinary system, data for that system should be very comparable between the two coding classifications.

5.3.12. DISEASES OF THE RESPIRATORY SYSTEM

This chapter of diseases (codes 460-519) was very well represented in the map. There were two codes that had 0.01 percent of NHDS data volume but were not represented in the map. These were 47829, Other diseases of pharynx, and 47874, Stenosis of larynx. The ICD-9 code 4782, Other diseases of pharynx not elsewhere classified, was mapped to 47822, Parapharyngeal abscess, which was one of the ICD-9 inclusion terms under 4782. This translation was based on clinical judgment. The ICD-9 code 4787, Other diseases of larynx not elsewhere classified, was also mapped to an inclusion term under that ICD-9 subcategory because of clinical considerations. The volume of data in these codes, as well as in the entire respiratory system chapter, was very minute (0.05 percent of NHDS data for entire chapter not represented in map).

5.3.13. SYMPTOMS, SIGNS, AND ILL-DEFINED CONDITIONS

The volume of NHDS data not represented in the symptoms chapter (codes 780-799) was very small (0.05 percent). However, one code, ICD-9-CM 78652, represented most of this volume. ICD-9 code 7865, Chest pain, was mapped to 78650, Chest pain unspecified, since that was the most equivalent translation. That code also had the highest volume in the 7865 subcategory (78,900 discharges). This left code 78652 unrepresented in the map, however, and the volume in that code was 14,600.

5.3.14. SUPPLEMENTARY CLASSIFICATION OF FACTORS INFLUENCING HEALTH STATUS AND CONTACT WITH HEALTH SERVICES

The V-codes (codes V01-V82) unrepresented in the map accounted for only 0.05 percent of the NHDS data. Most of these were personal history codes, and none had a substantial volume of data.

5.3.15. DISEASES OF THE SKIN AND SUBCUTANEOUS TISSUE

Only one code unrepresented in the map in this chapter (of ICD-9-CM codes 680-709) had substantial volume in the NHDS data. This was 70583, Hidradenitis, with 9,200 discharges. The ICD-9 code 7058, Other disorders of sweat glands, was translated to ICD-9-CM code 70589, Other specified disorders of sweat glands. Only 0.03 percent of the entire NHDS data was unrepresented by codes from the skin and subcutaneous tissue chapter.

5.3.16. INFECTIOUS AND PARASITIC DISEASES

This chapter (ICD-9-CM codes 001-139) was well represented in the map, as evidenced by the lack of NHDS data in the unmapped ICD-9-CM codes. Only 0.02 percent of the NHDS data fell into unmapped codes in this chapter, and of these, no substantial volume was in a particular code.

5.3.17. ENDOCRINE, NUTRITIONAL AND METABOLIC DISEASES, AND IMMUNITY DISORDERS

The endocrine codes (ICD-9-CM codes 240-279) were also very well mapped. Only 7,200 dispositions fell into unmapped codes in this chapter, representing 0.02 percent of total NHDS data. The unmapped code with the largest amount of data in this chapter was 25030, Diabetes with other coma, adult onset or unspecified as to type. ICD-9 code 2502 was divided into two codes in ICD-9-CM, separating Diabetes with hyperosmolar coma (2502) and Diabetes with other coma (2503). It was decided to map to 2502, which had slightly more volume in the NHDS data, but also seemed the better choice for clinical considerations.

5.3.18. CERTAIN CONDITIONS ORIGINATING IN PERINATAL PERIOD

The smallest amount of NHDS unmapped data fell into the perinatal chapter (codes 760-779), only about 3,000 discharges (0.01 percent of the NHDS data). These were all represented by one ICD-9-CM code, 77439, Other neonatal jaundice due to delayed conjugation from other causes. The ICD-9 code 7743, Neonatal jaundice due to delayed conjugation from other causes, was mapped to 77430, Neonatal jaundice due to delayed conjugation, cause unspecified.

6. CONCLUSIONS

AMEDD and DoD data can be effectively "mapped" from ICD-9 and ICPM to ICD-9-CM. This mapping strategy could be useful to any activity needing to bridge from ICD-9 diagnoses to ICD-9-CM. Since procedure and operation coding systems vary so widely, this procedure map is exclusively designed to adapt ICPM procedure data to ICD-9-CM.

Translation distortion has been minimized allowing users to assume the data reported in the converted data base accurately reflect the distribution of diagnoses likely to be present if the data had been originally coded in ICD-9-CM. Caveats and limitations to the employment of the map were discussed in detail.

A chapter-by-chapter analysis of the Ninth Revision, ICD diagnosis data with the converted data in ICD-9-CM was highly consistent. Further, although the populations were different (AMEDD versus NHDS data), the distribution of ICD-9-CM codes was compatible with the distribution of codes in the 1983 NHDS data.

The modification of the format of the IPDS data abstract was an effective method for implementing centralized, abstract-based case mix analyses using DRGs. It offered the necessary storage of the Grouper required input and output data elements. Converted diagnosis and procedure codes as well as other data elements requiring modification from the IPDS system such as age, sex and type of disposition were placed in the record following conversion. Grouper output was added to each record after the classification processing (e.g. MDC, DRG, and Return Code). It also offers the opportunity to initiate patient level, detailed case complexity analyses for many purposes.

Our preliminary analyses demonstrated the potential DoD application of DRGs to general biometric data and also established linkage to other data systems such as the Uniform Chart of Accounts enabling the implementation of case weighted analysis at cost center level.

This conversion and recoding effort brings a new dimension to medical treatment facility analysis: complexity of care, as measured by DRGs. We now have the ability to analyze the impact of case mix on MTF performance and as a result, create more effective mechanisms to measure productivity potentially resulting in a more accurate allocation of resources. The data base created in this portion of the study will be utilized more fully in the follow-on study which demonstrates case mix data generated for the AMEDD. The five-year DRG data base with converted ICD-9-CM data has been conservatively employed. The utility of this longitudinal DRG data base will allow exploration of trends and assimilation of different perspectives with impact ranging from health and facilities planning to medical program analysis to provider utilization, quality assurance and utilization review.

Refinement of DRG groupings into subdivisions of the current 470 DRGs would improve their statistical behavior and add confidence to the estimations employing DRGs for the AMEDD and DoD. At this point, we feel subclassification to account for military or DoD unique variables should be done on the consolidated data base being built at Fort Detrick comprised of all service data.

Our preliminary reports on case mix using DRGs on an aggregate and MTF level were influential and highly contributory to developing the understanding of this patient classification application at Department of the Army Surgeon General (DASG) and OASD(HA). Further, we believe the examples served to support the OASD(HA) initiative to move the service coding practices forward to ICD-9-CM.

Our ability to analyze the impact of coding on MTFs case mix has contributed and will continue to benefit service biometric coding decisions by providing an "a priori" impact analysis of how the data may be aggregated within a DRG environment.

The DRG data base enables case mix analysis ranging from clinic or UCA cost account level to MTF, region and worldwide level.

DRGs are effective to classify patients into meaningful groups. Although homogeneity of the data in this report reflects many heterogeneous groupings, they are more homogeneous products than any other classification methodology available to the AMEDD or DoD at this time.

The application of this technique has been labor intensive thus far, but future use of the methodology to any AMEDD or DoD data would be easily accomplished and reasonably inexpensive. No additional data collection was needed to produce the current report or the case mix report which will follow. With minor modification of the Fortran programs currently used, DoD data for all services could be converted to ICD-9-CM and Grouped to DRGs with the same accuracy providing for minor service specific adjustments.

7. RECOMMENDATIONS

1. The AMEDD and DoD should begin using the currently available DRG classification scheme to classify inpatient cases in all hospitals.
2. The AMEDD and DoD should modify the inpatient abstracts to include data element designation for MDC and DRG.
3. Refinement of DRG groupings into subdivisions of the current 470 DRGs should be done with consolidated service data as the next phase of a DoD effort to employ case mix strategies.
4. The services should maintain the ability to classify data to whatever the Federally sponsored reimbursement programs require (e.g., the current DRGs). This will mean that Service Biostatistical Counterpart groups and Service Professional Consultants who implement DoD modifications to the current coding convention will need to:
 - a. Assess the potential impact of a coding classification modification before it is implemented.
 - b. Insure coordination with the Department of Health and Human Services, Bureau of Data Management and Strategy, ICD-9-CM Coordination and Maintenance Committee. Specifically, an established procedure should be in place to monitor the nature of coding changes as well as to minimize the number of code modifications suggested.
 - c. Insure that when a modification is necessary it should be presented as a proper sub-categorization consistent with the taxonomy of the classification. The axis of the classification should not be changed, but rather modifications added to existing structure. For example, if the category is built on an axis of etiology, it should not be changed to performance or non-performance of lab testing. Code extensions, which operate within the current code structure, should be considered as a way of gathering required additional detailed data rather than code modifications. The resulting "extended" code would be comparable to National data which could be maintained and used for grouping by existing software.
5. The AMEDD and DoD should designate a DRG coordinating agency to monitor the changes in the DRG system and assess the impact of these changes on the DoD efforts to employ case mix performance measures. This agency should also serve as a point of contact to manage the increasing interest in DRG analyses. As more facility level requests for data are generated, it would be helpful to users and researchers to have a central activity for monitoring DRG developments and an agency that would recommend and implement changes to meet DoD needs addressing coding issues as they arise.
6. Refinement of DRGs should remain a high priority within the AMEDD and DoD. These refinements should consider the potential contribution of other currently available and relevant classification methodologies including Disease Staging, Patient Management Categories, Severity of Illness Index, and Nursing Acuity.
7. Health care providers and managers need to place emphasis on naming and coding diseases. When the medical record of the inpatient is finalized the providers, medical record professionals and patient administrators should

carefully monitor the accuracy and completeness of the encoded data to insure that it reflects the important details of the inpatient episode with special emphasis on primary diagnosis and surgical procedures.

8. BIBLIOGRAPHY

- A system to convert ICD diagnostic codes for alcohol research. (1984). MMWR, 33, 221-223.
- Ament, R. P., Kobrinski, E. J., & Wood, W. W. (1981). Case mix complexity differences between teaching and nonteaching hospitals. Journal of Medical Education, 56, 894-903.
- Anderson, G., & Ginsburg, P. B. (1984). Medicare payment and hospital capital: Future policy options. Health Affairs, 3(3), 35-48.
- Anderson, G. F., & Steinberg, E. P. (1985). Predicting hospital readmissions in the Medicare population. Inquiry, 22, 251-258.
- Applications Research Corporation. (1984). DRGs: The shape of bills to come. (Spec. Rep. from the National Report on Computers & Health). Rockville, MD: Author.
- Arbeit, R. D., Fears, J. R., & Plomann, M. (1985). The development of disease-specific patterns of care. ORB, 11, 235-239.
- Austin, V., & Baker, S. W. (1984). Inpatient performance measurement update: Data conversion. In Proceedings of the Tri-Service Performance Measurement Conference (pp. 217-265). San Antonio, TX: U.S. Army Health Care Studies and Clinical Investigation Activity. (NTIS No. AD A149511)
- Averill, R. F., & Kalison, M. J. (1985). Are national DRG rates the best choice for PPS? Healthcare Financial Management, 39(8), 62-66.
- Barnard, C. (1983). System strategies for case mix. Computers in Healthcare, 4(6), 28-32.
- Barnard, C. (1985). How to select and implement case-mix (product-line analysis) systems. Hospital Forum, 28, 25-30.
- Becker, L. A., Boyle, R. M., Froom, J., Schneeweiss, R., & Wood, M. (1981). A conversion code from ICHPPC-1 to ICHPPC-2. Journal of Family Practice, 12, 707-719.
- Berki, S. E., Ashcraft, M. L. F., & Newbrander, W. C. (1984). Length-of-stay variations within ICDA-8 diagnosis related groups. Medical Care, 22, 126-142.
- Bermas, N. F., & Van Slyck, A. (1984). Patient classification systems and the nursing department. Hospitals, 58(22), 99-100.
- Berry, R. E., Jr. (1973). On grouping hospitals for economic analysis. Inquiry, 10(4), 5-23.
- Brewster, A. C., Jacobs, C. M., & Bradbury, R. C. (1984). Classifying severity of illness by using clinical findings. Health Care Financing Review, 6(Ann. Suppl.), 107-108.
- Changing diagnosis codes [letter]. (1979). New England Journal of Medicine, 300, 738-739.

- Colls, M. H. (1980). A method for converting a disease registry's case-load to a new classification of diagnostic codes. Medical Informatics, 5, 121-130.
- Commission on Professional and Hospital Activities. (1984, July). Comparative case mix study. Ann Arbor, MI: Author. (Limited circulation study provided under contract for Department of the Army, Health Care Studies and Clinical Investigation Activity, Ft. Sam Houston, TX).
- Conklin, J. E., Lieberman, J. V., Barnes, C. A., & Louis, D. Z. (1984). Disease staging; Implications for hospital reimbursement and management. Health Care Financing Review, 6(Ann. Suppl.), 13-22.
- Corn, R. F. (1981). The sensitivity of prospective hospital reimbursement to errors in patient data. Inquiry, 18, 416-426.
- Crane, T. S. (1985). Hospital cost control in Norway: A decade's experience with prospective payment. Public Health Reports, 100, 406-417.
- Crawford, M., & Fottler, M. D. (1985). The impact of diagnosis related groups and prospective pricing systems on health care management. Health Care Management Review, 10(4), 73-84.
- Curb, J. D., Babcock C., Pressel, S., Tung, B., Remington, R. D., & Hawkins, C. M. (1983). Nosological coding of cause of death. American Journal of Epidemiology, 118, 122-128.
- Davies, R. H., & Westfall, G. (1983). Reimbursement under DRGs: Implementation in New Jersey. Health Services Research, 18, 233-247.
- Doremus, H. D., & Michenzi, E. M. (1983). An illustration of its potential impact upon a diagnosis-related group's case mix index and reimbursement. Medical Care, 21, 1001-1011.
- DRG dumping? [editorial]. (1985). Modern Healthcare, 15(6), 5.
- Evans, R. G. (1971). "Behavioural" cost functions for hospitals. Canadian Journal of Economics, 4, 198-215.
- Farseth, P. H. (1978). Changing diagnosis codes. New England Journal of Medicine, 299, 1187-1190.
- Fetter, R. B., Shin, Y., Freeman, J. L., Averill, R. F., & Thompson, J. D. (1980). Case mix definition by diagnosis-related groups. Medical Care, 18 (2, Suppl.).
- Fetter, R. D., & Freeman, J. L. (1984). A product approach to productivity improvements in health care. In J. M. Virgo (Ed.), Health Care: International Perspective (pp. 149-173). Edwardsville, IL: International Health Economics and Management Institute.
- Fetter, R. B., & Freeman, J. L. (1984). Hospital management by diagnosis related groups: United States and European experience. In W. van Eimeren, R. Engelbrecht, & C. D. Flagle (Eds.), Third International Conference on Science in Health Care (pp. 672-674). Berlin: Springer-Verlag.

- Fetter, R. B., Mills, L. M., & Mills R. E. (1975, November). A system for concurrent patient care evaluation. Paper presented at the meeting of the Operations Research Society of America and Institute of Management Sciences, Las Vegas, NV.
- Finkler, S. A. (1985). Flexible budget variance analysis extended to patient acuity and DRGs. Health Care Management Review, 10(4), 21-34.
- Fleming, S. T., Kobrinski, E. J., & Long, M. J. (1985). A multidimensional analysis of the impact of high-cost hospitalization. Inquiry, 22, 178-187.
- Flood, A. B., Scott, W. R., & Ewy, W. (1984). Does practice make perfect? Part 1: The relation between hospital volume and outcomes for selected diagnostic categories. Medical Care, 22, 98-114.
- Flood, A. B., Ewy, W., Scott, W. R., Forrest, W. H., & Brown, B. W. (1979). The relationship between intensity and duration of medical services and outcomes for hospitalized patients. Medical Care, 17, 1088-1102.
- Flood, A. B., Scott, W. R., & Ewy, W. (1984). Does practice make perfect? Part 2: The relation between volume and outcomes and other hospital characteristics. Medical Care, 22, 115-125.
- Foulis, P. R., Norbut, A. M., Mendelow, H., & Kessler, G. F. (1980). Pathology accessioning and retrieval system with encoding by computer (PARSEC). American Journal of Clinical Pathology, 73, 748-53.
- Gabrieli, E. R. (1982). Computerizing a cardiology practice: Condensing narrative text. In B. I. Blum (Ed.), Proceedings, the Sixth Annual Symposium on Computer Applications in Medical Care (pp. 841-843). Los Angeles: IEEE Computer Society Press.
- Gabrieli, E. R. (1975). Medical lexicon, pt. 1. Journal of Clinical Computing, 5, 38-64.
- Gabrieli, E. R. (1978). Medical information system, health records, and knowledge banks. Medical Instrumentation, 12, 245-247.
- Gee, S. C., & Page W. F., (1985). The use of comparability ratios to adjust hospital trend data. American Journal of Public Health, 75, 81-82.
- Gerber, P. C. (1985). How DRGs will increase your malpractice risk. Physician's Management, 25(2), 335-337, 340-342.
- Gertman, P. M., & Lowenstein, S. (1984). A research paradigm for severity of illness: Issues for the diagnosis-related group system. Health Care Financing Review, 6(Ann. Suppl.), 33-46.
- Gertman, P. M., & Restuccia, J. D. (1981). The appropriateness evaluation protocol: A technique for assessing unnecessary days of hospital care. Medical Care, 19, 855-871.
- Gillette, P. E. (1983). Computer must track patient costs. Modern Healthcare, 13(9), 154.

- Goldacre, M. J., & Harris, R. I. (1980). Mortality, morbidity, resource allocation, and planning: A consideration of disease classification. British Medical Journal, 281, 1515-1519.
- Graves, E. J. (1984, Sept. 28). 1983 summary: National hospital discharge survey. Advance Data, 101, 1-12.
- Grimaldi, P. L., & Micheletti, J. A. (1982). Homogeneity revisited: The new DRGs. Journal of American Medical Record Association, 53(2), 56-70.
- Grimaldi, P. L. (1985). Medicaid and Blue Cross DRG payment plans: A comparison. Health Progress, 66(8), 48-55, 79-80.
- Grimaldi, P. L. (1985). FY 1986 final PPS regulations. Nursing Management, 16(11), 53-55.
- Grimaldi, P. L. (1984). Cluster approach allows budgeting, planning with DRGs. Hospital Progress, 65(7), 73-79.
- Grimaldi, P. L. (1983). Calculating DRG-based Medicare payment rates. Hospital Progress, 64(10), 72-75, 80, 82.
- Grimaldi, P. L., & Micheletti, J. A. (1983). Diagnosis Related Groups (2nd ed.). Chicago: Pluribus Press.
- Guentert, B., Gesser, V., & Horisberger, B. (1984). Management-oriented hospital indicators. In W. van Eimeren, R. Engelbrecht, & C. D. Flagle (Eds.), Third International Conference on System Science in Health Care. (pp. 683-686). Berlin: Springer-Verlag.
- Hair, J.F., Jr., Anderson, R.E., Tatham, R.L., & Grablovsky, B. J. (1979). Multivariate Data Analysis With Readings. Tulsa, OK: Pipe Books.
- Health Systems International. (1985). Diagnosis Related Groups; definitions manual. DRGs. (Including Grouper Program). (2nd rev.). New Haven, CT: Author.
- Horn, S. D., Horn, R. A., & Sharkey, P. D. (1984). The Severity of Illness Index as a severity adjustment to diagnosis-related groups. Health Care Financing Review, 6(Ann. Suppl.), 33-46.
- Horn, S. D. (1985). A plan to modify DRGs. Measuring severity of illness gives a truer prediction of costs for treating hospital patients. Business and Health, 2(9), 32-35.
- Hospital Medical Records Institute. (1983, September). Inpatient program. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983, August). Care appraisal programs, Pt. 1: CAP 1 & Pt. 2: CAP 2. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983, May). Comparison of hospital activities program, Pt. 1, CHAP 1: On length of stay. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (n.d.). Contents of CMG's "Yellow Book." Don Mills, Ontario: Author.

- Hospital Medical Records Institute. (1983). Case mix groups and HMRI. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983). LOS database by CMG. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. Comparison of hospital activities program (CHAP). (1983, May). Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983). Pricing policy, 1983-1984. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983, May). Case mix groups (CMG's). Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983). Comparison of hospital activity program, Pt. 2, CHAP 2: On discharge analysis. Don Mills, Ontario: Author.
- Hospital Medical Records Institute. (1983). Comparison of hospital activity program, Pt. 3, CHAP 3: Based on same day surgery procedures. Don Mills, Ontario: Author.
- Iglehart, J. K. (1984). Hospitals, public policy, and the future: An interview with John Alexander McMahon. Health Affairs, 3(3), 20-34.
- Israel, R. A. (1984). Planning for the tenth revision of ICD. Journal of the American Medical Record Association, 55(12), 26-27.
- Jencks, S. F., Dobson, A., Willis, P., & Feinstein, P. H. (1984). Evaluating and improving the measurement of hospital case mix. Health Care Financing Review, 6(Ann. Supl.), 1-11.
- Johnstone, J., & Ray, W. J. (1983). Using medical records to ensure fair DRG reimbursement. Computers in Healthcare, 4(12), 32, 36, 40.
- Jones, R. (1984). Case-Mix and computers. Computers in Healthcare, 5(6), 42-45.
- Kay, T. L., & Rieder, K. A. (1983). Using diagnosis related groups (DRGs) to monitor convalescent leave. Research Department, Naval School of Health Sciences. Bethesda, MD: Author.
- Klann, S. S. (1985). At Congress, HCFA Administrator Carolyn Davis told the future of the prospective payment payment system. AORN Journal, 41, 930-938.
- Klastorin, T. D., & Watts, C. A. (1982). A current reappraisal of Berry's hospital typology. Medical Care, 20, 441-449.
- Kloss, L. L., & Hyde, L. A. (1985). Severity of illness classification using the Medical Illness Severity Grouping System. Topics in Health Records Management, 6, 16-28.
- Kominski, G. F., Williams, S. V., Mays, R. B., & Pickens, G. T. (1984). Unrecognized redistributions of revenue in diagnosis-related group-based prospective payment systems. Health Care Financing Review, 6(Ann. Supl.), 57-69.

- Kurtzke, J. F. (1979). Reviews and commentary. ICD-9: A regression. American Journal of Epidemiology, 109, 383-387.
- Lave, J. R., & Lave, L. B. (1971). The extent of role differentiation among hospitals. Health Services Research, 6, 15-38.
- Leske, M. C., Sorensen, A. A., & Zimmer, J. G. (1978). Discrepancies between admission and discharge diagnoses in a university hospital. Medical Care, 16, 740-748.
- Levine, E., & Abdellah, F. G. (1984). DRGs: A recent refinement to an old method. Inquiry, 21, 105-112.
- Lewis, J., Maupin, G., O'Donnell, E., & Sauer, A. (1983). Development of a case mix. Computers in Healthcare, 4(2), 36-41.
- Luft, H. S., Bunker, J. P., & Enthoven, A. C. (1979). Should operations be regionalized? The empirical relation between surgical volume and mortality. New England Journal of Medicine, 301, 1364-1369.
- Luke, R., & Hornbrook, M. Conceptual foundations for hospital classification. Unpublished manuscript.
- Mandel, B. J. (1972). Statistics for management. Baltimore: Dangary Publishing Company.
- May, J. J., & Wasserman, J. (1984). Selected results from an evaluation of the New Jersey diagnosis-related group system. Health Services Research, 19, 547-559.
- Mesel, E., & Wirtschafter, D. D. (1976). Automation of a patient medical profile from insurance claims data: A possible first step in automating ambulatory medical records on a national scale. Milbank Memorial Fund Quarterly, 54, 29-45.
- Mills, R. E. (1975). CML, AUTOGRP and related research, 1969 to 1975. Unpublished manuscript.
- McCarthy, E. G., & Finkel, M. L. (1980). Surgical utilization in the U.S.A. Medical Care, 18, 883-892.
- Mushlin, A. I., & Steinwachs, D. M. (1978). The Johns Hopkins ambulatory-care coding scheme. Health Services Research, 13, 36-49.
- Nackel, J. G. (1984). How DRGs are changing the hospital's information needs. Trustee, 37(5), 24, 26, 28.
- Ohmichi, H., & Miyake, S. (1984). A diagnosis related cost analysis in Japanese hospital care. In W. van Eimeren, R. Engelbrecht, & C. D. Flagle (Eds.), Third International Conference on System Science in Health Care (pp. 675-678). Berlin: Springer-Verlag.
- Owens, T. R., & Averill, R. F. (1984). The role of utilization management under PPS. Healthcare Financial Management, 38(10), 60-66.

- Plomann, M. P. (1985). Choosing a patient classification system to describe the hospital product. Hospital & Health Services Administration, 30, 106-117.
- Restuccia, J. D., Gertman, P. M., Dayno, S. J., Kreger, B. E., & Lenhart, G. M. (1984). The appropriateness of hospital use. Health Affairs, 3(2), 130-138.
- Riedel, D. C., Fetter, R. B., Mills, R. E., & Pallett, P. J. Basic utilization review program (BURP). Unpublished manuscript.
- Rinaldo, J. A., Jr., McCubbrey, D. J., & Shryock, J. R. (1982). The care-monitoring, cost-forecasting, and cost-monitoring system. Journal of Medical Systems, 6, 315-327.
- Robinson, M. L. (1985). How Medicaid is moving to DRGs. Health Span, 2(4), 21-27.
- Roos, L. L., Roos, N. P., Cageorge, S. M., & Nicol, J. P. (1982). How good are the data? Reliability of one health care data bank. Medical Care, 20, 266-276.
- Rutstein, D. D., Berenberg, W., Chalmers, T. C., Child, C. G., Fishman, A. P., & Perrin, E. B. (1976). Measuring the quality of medical care: A clinical method. New England Journal of Medicine, 294, 582-588.
- Sanderson, H. F. (1984). Adapting diagnosis related groups for use in England and Wales. In W. van Eimeren, R. Engelbrecht, & C. D. Flagle (Eds.), Third International Conference on System Science in Health Care (pp. 679-682). Berlin: Springer-Verlag.
- Sartorius, N. (1976). Conference working papers: Methodologic problems of common terminology, measurement, and classification. 11. Modifications and new approaches to taxonomy in long-term care: Advantages and limitations of the ICD. Medical Care, 14(5, Suppl.), 109-115.
- Schneeweiss, R., Stuart, H. W., Froom, J., Wood, M., Tindall, H. L., & Williamson, J. D. (1977). A conversion code from the RCGP to the ICHPPC classification system. Journal of Family Practice, 5, 415-424.
- Shear, C. L., & Wall, E. M. (1985). Diagnosis cluster frequency in a community-based family practice residency program. Comparison with large ambulatory data sets. Western Journal of Medicine, 142, 854-857.
- Siemon, J. E. (1982). The correlation between inpatient diagnostic and billing codes: The principal diagnosis. Topics in Health Record Management, 2(4), 67-76.
- Slee, V. N. (1978). The International Classification of Diseases: Ninth Revision (ICD-9). Annals of Internal Medicine, 88, 424-426.
- Smits, H. L., Fetter, R. B., & McMahon, L. F. (1984). Variation in resource use within diagnosis-related groups: The severity issue. Health Care Financing Review, 6(Ann. Suppl.), 71-78.

- Stanford University, Stanford Center for Health Care Research. (1976). Comparison of hospitals with regard to outcomes of surgery. Health Services Research, 11, 112-127.
- Tedeschi, P., & Griffith, J. R. (1984). Classification of hospital patients as "surgical": Implications of the shift to ICD-9-CM. Medical Care, 22, 189-192.
- Thompson, J. D. (1984). The measurement of nursing intensity. Health Care Financing Review, 6(Ann. Suppl.), 47-55.
- Thompson, J. D., & Diers, D. (1985). DRGs and nursing intensity. Nursing & Health Care, 6, 435-439.
- Thompson, J. D., Fetter, R. B., & Mross, C. D. (1975). Case mix and resource use. Inquiry, 12, 300-312.
- U.S. Army. Health Care Studies and Clinical Investigation Activity. (1984). Proceedings of the Tri-Service Performance Measurement Conference (HCSD Rep. No. 84-002). San Antonio, TX: Author. (NTIS No. AD A149511)
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, June 10). Medicare program; Changes to the inpatient prospective payment system and fiscal year 1986 rates; Proposed rule. Federal Register, 50(111), 24366-24497.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, August 31). Medicare program; Changes to the inpatient hospital prospective payment system and fiscal year 1985 rates; Final rule. Federal Register, 49(171), 34728-34797.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1983, September 1). Medicaid program; Deeming of income between spouses; Categorically needy. Federal Register, 48(171), 39624-39629.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1983, September 1). Medicare program; Prospective payments for medicare inpatient hospital services; Interim final rule with comment period. Federal Register, 48(171), 39752-39890.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1983, September 1). Medicare program; Schedule of target rate percentages for limits on the rate of hospital cost increases and updating factors for transition prospective payment rates; Interim final notice with comment period. Federal Register, 48(171), 39746-39750.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1983, September 1). Medicare program; Payment for physician services furnished in hospitals, skilled nursing facilities, and comprehensive outpatient rehabilitation facilities; Combined billing. Federal Register, 48(171), 39740-39744.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, August 31). Medicare program; Changes to the inpatient hospital prospective payment system and fiscal year 1985 rates; Final rule. Federal Register, 49(171), 34728-34797.

- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, September 3). Medicare program; Changes to the inpatient hospital prospective payment system and fiscal year 1986 rates; Final rule. Federal Register, 50(170), 35646-35759.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, April 18). Medicare program; Utilization and quality control peer review organizations; Imposition of sanctions on health care practitioners and providers of health care services. Federal Register, 49(76), 15233-15240.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, January 3). Medicare program; Prospective payment for Medicare inpatient hospital services; Final rule. Federal Register, 49(1), 234-334.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, January 3). Medicare program; Schedule of target percentages for limits on the rate of hospital cost increases and updating factors for transition prospective payment rates; Second quarter FY 84; Notice. Federal Register, 49(1), 336-340.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, April 16). Medicare program; Utilization and quality control peer review organization (PRO) are designations and definitions of eligible organizations. Federal Register, 49(74), 14954.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1984, April 16). Medicare program; Acquisition, protection and disclosure of utilization and quality control peer review organization (PRO) information. Federal Register, 49(74), 14977-14986.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, November 12). Medicare; Delay in implementing certain changes to the prospective payment system. Federal Register, 50(218), 46651-46652.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, November 12). Medicaid program; Third party liability for medical assistance; FFP rates for skilled professional personnel medical personnel and supporting staff; and Sources of state share of financial participation. Federal Register, 50(218), 46652-46666.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, November 12). Medicare program; Utilization and quality control peer review program; Solicitation of comments on proposed PRO program scope of work. Federal Register, 50(218), 46702.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, July 22). Privacy Act of 1974; Report of new system. Federal Register, 50(140), 29766-29767.
- U.S. Department of Health and Human Services. Health Care Financing Administration. (1985, October 11). Medicare program; Limitation on payment for services furnished to employed aged and aged spouses of employed individuals. Federal Register, 50(198), 41503-41510.

- U.S. Department of Health and Human Services. (1982). Report to Congress: Hospital prospective payment for Medicare. Unpublished manuscript.
- U.S. Public Health Service, & Health Care Financing Administration. (1980). International classification of diseases, 9th revision, clinical modification. 2nd ed. 3 vols. (DHHS Pub. No. 80-1260. Public Health Service). Washington, D.C.: U.S. Government Printing Office.
- Vaillancourt, M. (1984). PHYSIS (PHYSiotherapy [sic] information system. In W. van Eimeren, R. Engelbrecht, & C. D. Flagle (Eds.). Third International Conference on System Science in Health Care (pp. 687-691). Berlin: Springer-Verlag.
- Vaughan, R. G., & MacLeod, V. (1985). Comparing acuity among hospitals who has the sickest patients? Journal of Nursing Administration, 15(5), 25-28.
- Wagner, D. P., & Draper, E. A. (1984). Acute physiology and chronic health evaluation (APACHE II) and medicare reimbursement. Health Care Financing Review, 6(Ann. Suppl.), 91-105.
- Weed, L. L. (1968). Medical records that guide and teach. New England Journal of Medicine, 278(11-12), 593-600; 652-657.
- Wood, W. R., Ament, R. P., & Kobrinski, E. J. (1981). A foundation for hospital case mix measurement. Inquiry, 18, 247-254.
- World Health Organization. (1977). Manual of the international statistical classification of diseases, injuries, and causes of death. 9th revision. 2 vols. Geneva, Switzerland: Author.
- World Health Organization. (1978). International classification of procedures in medicine: Vol. 1. Geneva, Switzerland: Author.
- Yale University, School of Organization and Management, Health Systems Management Group. (1982). Sections I, II, III, IV, V. The new ICD-9-CM diagnosis related groups (DRGs) classification scheme (Fin. Rep.). New Haven, CT: Author.
- Yale University, School of Organization and Management, Health Systems Management Group. (1982). Sections VII, VIII, IX. The new ICD-9-CM diagnosis related groups classification scheme (Fin. Rep.). New Haven, CT: Author.
- Yale University, School of Organization and Management, Health Systems Management Group. (1982). Section VI. The new ICD-9-CM diagnosis related groups classification scheme (Fin. Rep.). New Haven, CT: Author.
- Young, W. W., Swinkola, R. B., & Zorn, D. M. (1982). The measurement of hospital case mix. Medical Care, 20, 501-512.
- Young, W. (1984). Incorporating severity of illness and comorbidity in case-mix measurement. Health Care Financing Review, 6(Ann. Suppl.), 23-21.
- Young, W. W. (in press). Measuring the cost of care using patient management categories (HCFA Project Summary). HCFA Grant No. 18-P-97063/3. Unpublished manuscript.

Young, W. W. (in press). Scope of the study. Measuring the cost of care using patient management categories. HCFA Grant No. 18-P-97063/3. Unpublished manuscript.

Young, W. W. (in press). Patient management categories: Description. Measuring the cost of care using patient management categories. HCFA Grant No. 18-P-97063/3. Unpublished manuscript.

Young, W. W. (in press). Patient management category classification software. Measuring the cost of care using patient management categories. HCFA Grant No. 18-P-97063/3. Unpublished manuscript.

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Young, W. W. (in press). Patient management paths: Description. Measuring the cost of care using patient management categories. HCFA Grant No. 18-P-97603/3. Unpublished manuscript.

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A. GLOSSARY OF CASE MIX AND DRG TERMS

Case-mix - the diagnosis-specific makeup of a health program's workload. Case-mix directly influences the length of stays in, and intensity, cost and scope of the services provided by a hospital or other health program. (A Discursive Dictionary, page 24)

Class I procedure - A significant procedure which carries an operative or an anesthetic risk or requires highly trained personnel or special facilities or equipment. (UHDDS, Item 12 - Procedures, AHA, June 1978)

Comorbidity - a pre-existing condition that will, because of its presence with a specific principal diagnosis, cause an increase in length of stay by at least one day in approximately 75 percent of the cases. (Health Care Financing Administration)

Complication - a condition that arises during the hospital stay that prolongs the length of stay by at least one day in approximately 75 percent of the cases. (Health Care Financing Administration)

Diagnosis Related Groups (DRGs) - a system developed by Yale University for classifying patients into groups that are clinically coherent and homogeneous with respect to resources used. There are 467 DRGs. (39760)

DRG Weight - an index number which reflects the relative resource consumption associated with each DRG. (39768)

Discharge - a hospital inpatient is discharged when: 1) the patient is formally released from the hospital (except when transferred to another hospital under the prospective payment system); 2) the patient dies in the hospital; or 3) the patient is transferred to a hospital or unit that is excluded from the prospective payment system. (39818)

Discharge Face Sheet - (May be called Discharge Summary or Discharge Abstract) - a summary of the admission which is prepared at the time of the patient's discharge from the hospital. Information contained on the discharge face sheet includes demographic information, source of payment, length of stay, principal diagnosis, secondary diagnoses or complications, procedures performed, services provided and other information which may be relevant to a particular hospital. (American Medical Records Association)

Grouper - computer software program which is used by the fiscal intermediary in all cases to assign discharges to the appropriate DRGs using the following information abstracted from the inpatient bill: patient's age, sex, principal diagnosis, principal procedures performed and discharge status. (39760-61)

ICD-9-CM (International Classification of Diseases, Ninth Revision, Clinical Modification) - a system for classifying diseases and operations to facilitate collection of uniform and comparable health information. (Health Care Financing Administration)

Inpatient Services - all inpatient operating costs for routine services, ancillary services, intensive care type unit services and malpractice insurance. (39761)

Major Diagnostic Category (MDC) - a MDC is a broad clinical category that is differentiated from all others based on body system involvement and disease etiology. The 23 MDCs cover the complete range of diagnoses contained in the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). (39760)

Outliers (Atypical Cases) - cases which have an extremely long length of stay (day outlier) or extraordinarily high costs (cost outlier) when compared to most discharges classified in the same DRG. (39776)

Primary Procedure - principal operating room procedure performed on a given patient. (Health Care Financing Administration)

Principal Diagnosis - that condition which after study is determined to be chiefly responsible for occasioning the admission of the patient to the hospital. (39761)

Transfer - movement of a patient: 1) from one inpatient area or unit of a hospital to another area or unit of the hospital; 2) from the care of a hospital paid under prospective payment to the care of another such hospital; or, 3) from the care of a hospital under prospective payment to the care of a hospital in an approved statewide cost control program. (39818)

Weighting Factor - a weight intended to represent the relative resource consumption associated with each DRG across all hospitals. (39768)

Note: Numbers following definitions indicate page numbers of the September 1, 1983 Federal Register, 48(171).

B. DATA CONVERSION PROCESS

The actual conversion from ICD-9 and ICPM to ICD-9-CM diagnoses and procedures was accomplished using a computer program written in FORTRAN language. The program first converted demographic elements, i.e., age, sex, and discharge status, into codes required by the DRG Grouper Program. After that was accomplished, each diagnosis and procedure field was read and matched with codes in map exception tables using binary lookup techniques. If a diagnosis code found a match in the table, then the corresponding ICD-9-CM code from the table was written to the record in the CM diagnosis field. If a match were not found, then no translation was made, and the unchanged ICD-9 diagnosis code was written to the CM field. The map exception table contained only codes where the ICD-9 and ICD-9-CM codes were not equivalent.

The procedure mapping was accomplished in much the same way, except that unmatched procedure codes were not written to the recoded CM procedure fields at all. The intent was to convert only "operating room" procedures used by the grouper. Therefore, many diagnostic and therapeutic procedure codes were not used in the DRG grouping process. This technique left the procedure fields not sequentially filled; therefore, the last part of the FORTRAN program resequenced the procedure fields, moving the filled fields to the beginning of the procedure fields and leaving the blank fields at the end.

The FORTRAN program employed "character" manipulation techniques as opposed to "words," which effectively enabled the processing of extremely large data sets in a minimum of time. Including the recoding of the demographic variables and up to eight diagnostic and procedure fields, and some editing, the central processing unit time involved was less than one minute per 48,500 records.

C. ABBREVIATIONS USED IN ICD-9-CM DRG ENGLISH DESCRIPTORS

ABBREVIATION	DESCRIPTION
>1HR	Greater than 1 Hour
Age 0-17	Age Zero Through Seventeen
Age 18-69	Age Eighteen through Sixty-nine
Age >17	Age Greater Than 17
Age >35	Age Greater Than 35
Age >69	Age Greater Than 69
Age <70	Age Less Than 70
ALC	Alcoholic
AMA	Left Against Medical Advise
AMI	Acute Myocardial Infarction
AMPUT	Amputation
C.D.E.	Common Bile Duct Exploration
C.V.	Cardiovascular
CARD	Cardiac
CATH	Catheter
CC	Complication and/or Comorbidity
CIRC	Circulatory
CIRR	Cirrhosis
COMP	Complication
COND	Condition
CONN	Connective
CONT	Continued
D&C	Dilation & Curettage (of Uterus)
DEBRID	Debridement
DEPEND	Dependence

ABBREVIATIONS USED IN ICD-9-CM DRG ENGLISH DESCRIPTORS

ABBREVIATION	DESCRIPTION
DETOX	Detoxification
DIAG	Diagnosis
DIFF	Differentiated
DIGEST	Digestive
DIS	Disease, Disorder
DISCH	Discharged
DISORD	Disorder
DRG	Diagnoses Related Group
DX	Diagnosis
ENDOC	Endocrine
EX	Except
EXTREM	Extremity
FIX	Fixation
FUO	Fever of Unknown Origin
G.I.	Gastrointestinal
Gastroent	Gastroenteritis
GEN	Generator
GRFT	Graft
HCFA	Health Care Financing Administration
HEPA	Hepatitis
HUMER	Humerus
ICD-9-CM	International Classification of Diseases, 9th Revision, Clinical Modification
INDUCE	Induced
INT	Interval

ABBREVIATIONS USED IN ICD-9-CM DRG ENGLISH DESCRIPTORS

ABBREVIATION	DESCRIPTION
INTERRUPT	Interruption
INTOX	Intoxication
LOWLEG	Lower Leg
M	Medical DRG
MAJ	Major
MALIG	Malignancy
MDC	Major Diagnostic Category
META, METABOL	Metabolic
MISC	Miscellaneous
MUSCSKELET, MUSCULOSKELET	Musculoskeletal
MYELOPROLIF	Myeloproliferative
NEOPL	Neoplasm
NERV	Nervous
NUTRIT	Nutritional
OR, O.R.	Operating Room
OTH	Other
P	Surgical DRG
PDX	Principal Diagnosis
PERIPH	Peripheral
PERM	Permanent
PROC	Procedure(s)
REACT	Reaction
REHAB	Rehabilitation
REPL	Replace
RESP	Respiratory

ABBREVIATIONS USED IN ICD-9-CM DRG ENGLISH DESCRIPTORS

ABBREVIATION	DESCRIPTION
REVIS	Revision
SDX	Secondary Diagnosis
SKN	Skin
SPRN	Sprain
STERIL	Sterilization
STRN	Strain
SUBCUT	Subcutaneous
SUBST	Substance
SYMPT	Symptomatic
SYN	Syndrome
SYS, SYST	System
T&A	Tonsil & Adenoid
TIA	Transient Ischemic Attack
TISS	Tissue
TOT	Total
TREAT	Treatment
UPARM	Upper Arm
URI	Upper Respiratory Infection
W	With
W/O	Without
WND	Wound

D. DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
001	001	S	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	3.3548	19.4	39
002	001	S	CRANIOTOMY FOR TRAUMA AGE >17	3.2829	15.8	36
003	001	S	CRANIOTOMY AGE <18	2.9489	12.7	33
004	001	S	SPINAL PROCEDURES	2.2452	16.0	36
005	001	S	EXTRACRANIAL VASCULAR PROCEDURES	1.6780	9.8	30
006	001	S	CARPAL TUNNEL RELEASE	0.3993	2.6	8
007	001	S	PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE >69 +/-OR C	1.0279	5.3	25
008	001	S	PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE <70 W/O C.	0.7239	4.1	23
009	001	M	SPINAL DISORDERS + INJURIES	1.3958	9.1	29
010	001	M	NERVOUS SYSTEM NEOPLASMS AGE >69 AND/OR C. C.	1.3087	9.6	30
011	001	M	NERVOUS SYSTEM NEOPLASMS AGE <70 W/O C. C.	1.2545	8.5	29
012	001	M	DEGENERATIVE NERVOUS SYSTEM DISORDERS	1.1136	9.4	29
013	001	M	MULTIPLE SCLEROSIS + CEREBELLAR ATAXIA	1.0150	8.9	29
014	001	M	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1.3527	9.9	30
015	001	M	TRANSIENT ISCHEMIC ATTACKS	0.6673	5.6	24
016	001	M	NONSPECIFIC CEREBROVASCULAR DISORDERS WITH C. C.	0.8592	7.4	27
017	001	M	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O C. C.	0.8392	7.2	27
018	001	M	CRANIAL + PERIPHERAL NERVE DISORDERS AGE >69 AND/OR C. C.	0.7915	6.6	27
019	001	M	CRANIAL + PERIPHERAL NERVE DISORDERS AGE <70 W/O C. C.	0.6975	5.7	26
020	001	M	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	1.3141	7.6	28
021	001	M	VIRAL MENINGITIS	0.6301	4.5	15
022	001	M	HYPERTENSIVE ENCEPHALOPATHY	0.7869	6.4	26
023	001	M	NONTRAUMATIC STUPOR + COMA	1.1568	5.9	26
024	001	M	SEIZURE + HEADACHE AGE >69 AND/OR C. C.	0.7279	5.6	26
025	001	M	SEIZURE + HEADACHE AGE 18-69 W/O C. C.	0.6392	4.9	25
026	001	M	SEIZURE + HEADACHE AGE 0-17	0.4349	3.3	13
027	001	M	TRAUMATIC STUPOR + COMA, COMA>1 HR	1.1368	4.1	24
028	001	M	TRAUMATIC STUPOR + COMA, COMA <1 HR AGE >69 AND/OR C. C.	1.0701	5.9	26
029	001	M	TRAUMATIC STUPOR + COMA <1 HR AGE 18-69 W/O C. C.	0.7175	3.8	24
030	001	M	TRAUMATIC STUPOR + COMA <1 HR AGE 0-17	0.3576	2.0	08
031	001	M	CONCUSSION AGE >65 AND/OR C. C.	0.6051	4.6	25
032	001	M	CONCUSSION AGE 18 - 69 W/O C. C.	0.4519	3.3	19
033	001	M	CONCUSSION AGE 0-17	0.2483	1.6	05
034	001	M	OTHER DISORDERS OF NERVOUS SYSTEM AGE >69 AND/OR C. C.	0.9927	7.1	27
035	001	M	OTHER DISORDERS OF NERVOUS SYSTEM AGE <70 W/O C. C.	0.8460	6.2	26
036	002	S	RETINAL PROCEDURES	0.7093	5.0	15
037	002	S	ORBITAL PROCEDURES	0.5630	3.4	11
038	002	S	PRIMARY IRIS PROCEDURES	0.4325	3.0	9
039	002	S	LENS PROCEDURES	0.5010	2.8	6
040	002	S	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	0.3977	2.4	7
041	002	S	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	0.3695	1.6	4
042	002	S	INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS + LENS	0.5906	3.8	12
043	002	M	HYPHEMA	0.3828	4.2	12

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
044	002	M	ACUTE MAJOR EYE INFECTIONS	0.6298	6.5	22
045	002	M	NEUROLOGICAL EYE DISORDERS	0.5641	4.3	18
046	002	M	OTHER DISORDERS OF THE EYE AGE >17 WITH C.C	0.5964	4.1	23
047	002	M	OTHER DISORDERS OF THE EYE AGE >17 W/O C.C	0.5064	3	12
048	002	M	OTHER DISORDERS OF THE EYE AGE 0-17	0.4060	2.9	13
049	003	S	MAJOR HEAD + NECK PROCEDURES	2.5270	13.6	34
050	003	S	SIALOADENECTOMY	0.7160	4.6	14
051	003	S	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	0.6702	4.2	15
052	003	S	CLEFT LIP + PALATE REPAIR	0.6488	3.8	11
053	003	S	SINUS + MASTOID PROCEDURES AGE >17	0.5895	3.5	11
054	003	S	SINUS + MASTOID PROCEDURES AGE 0-17	0.6961	3.2	11
055	003	S	MISCELLANEOUS EAR, NOSE + THROAT PROCEDURES	0.4153	2.5	7
056	003	S	RHINOPLASTY	0.4144	2.8	8
057	003	S	T + A PROC EXCEPT TONSILLECTOMY +/-OR ADENOIDECTOMY AGE >17	0.5251	2.7	9
058	003	S	T + A PROC EXCEPT TONSILLECTOMY +/-OR ADENOIDECTOMY AGE 0-17	0.3130	1.5	3
059	003	S	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE >17	0.3147	2	4
060	003	S	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE 0-17	0.2643	1.5	3
061	003	S	MYRINGOTOMY AGE >17	0.4273	2.1	9
062	003	S	MYRINGOTOMY AGE 0-17	0.3121	1.3	3
063	003	S	OTHER EAR, NOSE + THROAT O.R. PROCEDURES	1.1090	5.8	26
064	003	M	EAR, NOSE + THROAT MALIGNANCY	1.0812	5.7	26
065	003	M	DISEQUILIBRIUM	0.4857	4.6	17
066	003	M	EPISTAXIS	0.4116	3.7	15
067	003	M	EPIGLOTTIS	0.6762	4.3	17
068	003	M	OTITIS MEDIA + URI AGE >69 AND/OR C. C.	0.6289	6	22
069	003	M	OTITIS MEDIA + URI AGE 18-65 W/O C. C.	0.5417	4.8	19
070	003	M	OTITIS MEDIA + URI AGE 0-17	0.3697	3.1	10
071	003	M	LARYNGOTRACHEITIS	0.3589	2.9	9
072	003	M	NASAL TRAUMA + DEFORMITY	0.4857	3.8	18
073	003	M	OTHER EAR, NOSE + THROAT DIAGNOSES AGE >17	0.5217	3.5	17
074	003	M	OTHER EAR, NOSE + THROAT DIAGNOSES AGE 0-17	0.3463	2.1	9
075	004	S	MAJOR CHEST PROCEDURES	2.6044	14.4	34
076	004	S	O.R. PROC ON THE RESP SYSTEM EXCEPT MAJOR CHEST WITH C. C.	1.8734	10.6	31
077	004	S	O.R. PROC ON THE RESP SYSTEM EXCEPT MAJOR CHEST W/O C. C.	1.8178	9.5	30
078	004	M	PULMONARY EMBOLISM	1.4095	10.4	30
079	004	M	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE >69 AND/OR C. C.	1.7982	11.2	31
080	004	M	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 18-69 W/O C. C.	1.7445	10.9	31
081	004	M	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 0-17	0.8743	6.1	26
082	004	M	RESPIRATORY NEOPLASMS	1.1400	7.4	27
083	004	M	MAJOR CHEST TRAUMA AGE >69 AND/OR C.C.	0.9809	8.1	28
084	004	M	MAJOR CHEST TRAUMA AGE <70 W/O C. C.	0.7738	5.3	22
085	004	M	PLEURAL EFFUSION AGE >69 AND/OR C. C.	1.1461	8.4	28
086	004	M	PLEURAL EFFUSION AGE <70 W/O C. C.	1.1217	7.6	28

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
087	004	M	PULMONARY EDEMA + RESPIRATORY FAILURE	1.5529	7.7	28
088	004	M	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1.0412	7.5	28
089	004	M	SIMPLE PNEUMONIA + PLEURISY AGE >69 AND/OR C. C.	1.1029	8.5	29
090	004	M	SIMPLE PNEUMONIA + PLEURISY AGE 18-69 W/O C. C.	0.9849	7.6	28
091	004	M	SIMPLE PNEUMONIA + PLEURISY AGE 0-17	0.5131	4.6	14
092	004	M	INTERSTITIAL LUNG DISEASE AGE >69 AND/OR C. C.	1.0370	7.8	28
093	004	M	INTERSTITIAL LUNG DISEASE AGE <70 W/O C. C.	0.9724	6.9	27
094	004	M	PNEUMOTHORAX AGE >69 AND/OR C. C.	1.4374	9.2	29
095	004	M	PNEUMOTHORAX AGE <70 W/O C. C.	1.1252	7.7	28
096	004	M	BRONCHITIS + ASTHMA AGE >69 AND/OR C. C.	0.7996	6.9	24
097	004	M	BRONCHITIS + ASTHMA AGE 18-69 W/O C. C.	0.7256	6.2	21
098	004	M	BRONCHITIS + ASTHMA AGE 0-17	0.4275	3.7	11
099	004	M	RESPIRATORY SIGNS + SYMPTOMS AGE >69 AND/OR C. C.	0.8035	5.5	26
100	004	M	RESPIRATORY SIGNS + SYMPTOMS AGE <70 W/O C. C.	0.7730	5.1	24
101	004	M	OTHER RESPIRATORY DIAGNOSES AGE >69 AND/OR C. C.	0.9035	6.8	27
102	004	M	OTHER RESPIRATORY DIAGNOSES AGE <70	0.9024	6.1	26
103	005	S	HEART TRANSPLANT	0.0000	0	0
104	005	S	CARDIAC VALVE PROCEDURE WITH PUMP + WITH CARDIAC CATH	6.8527	20.9	41
105	005	S	CARDIAC VALVE PROCEDURE WITH PUMP + W/O CARDIAC CATH	5.2308	16.2	36
106	005	S	CORONARY BYPASS WITH CARDIAC CATH	5.2624	20.4	40
107	005	S	CORONARY BYPASS W/O CARDIAC CATH	3.9891	13.5	34
108	005	S	CARDIOTHOR PROC, EXCEPT VALVE + CORONARY BYPASS, WITH PUMP	4.3756	13.3	33
109	005	S	CARDIOTHORACIC PROCEDURES W/O PUMP	3.6963	12.1	32
110	005	S	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE >69 AND/OR C. C.	2.9328	14.3	34
111	005	S	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE <70 W/O C. C.	2.5851	13.2	33
112	005	S	VASOLLAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION	2.3500	11.2	31
113	005	S	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB + TOE	2.6800	21.6	42
114	005	S	UPPER LIMB + TOE AMPUTATION FOR CIRC SYSTEM DISORDERS	2.1067	16.6	37
115	005	S	PERMANENT CARDIAC PACEMAKER IMPLANT WITH AMI OR CHF	3.9150	15.8	36
116	005	S	PERMANENT CARDIAC PACEMAKER IMPLANT W/O AMI OR CHF	2.8665	9.3	29
117	005	S	CARDIAC PACEMAKER REPLACE + REVIS EXC PULSEGEN REPL ONLY	1.8210	6.4	26
118	005	S	CARDIAC PACEMAKER PULSE GENERATOR REPLACEMENT ONLY	1.7809	4.2	18
119	005	S	VEIN LIGATION + STRIPPING	1.0610	7.2	27
120	005	S	OTHER O.R. PROCEDURES ON THE CIRCULATORY SYSTEM	2.5204	15	35
121	005	M	CIRCULATORY DISORDERS WITH AMI + C.V. COMP. DISCH. ALIVE	1.8648	11.9	32
122	005	M	CIRCULATORY DISORDERS WITH AMI W/O C.V. COMP. DISCH. ALIVE	1.3651	9.8	30
123	005	M	CIRCULATORY DISORDERS WITH AMI, EXPIRED	1.1360	3.1	23
124	005	M	CIRCULATORY DISORDERS EXC AMI, WITH CARD CATH + COMPLEX DIAG	2.2200	8.4	28
125	005	M	CIRCULATORY DISORDERS EXC AMI, WITH CARD CATH W/O COMPLEX DI	1.6455	5	25
126	005	M	ACUTE + SUBACUTE ENDOCARDITIS	2.6645	18.4	38
127	005	M	HEART FAILURE + SHOCK	1.0408	7.8	28
128	005	M	DEEP VEIN THROMBOPHLEBITIS	0.8639	9.6	28
129	005	M	CARDIAC ARREST	1.5506	4.6	25

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
130	005	M	PERIPHERAL VASCULAR DISORDERS AGE >69 AND/OR C. C.	0.9645	7.1	27
131	005	M	PERIPHERAL VASCULAR DISORDERS AGE <70 W/O C. C.	0.9491	6.4	26
132	005	M	ATHEROSCLEROSIS AGE >69 AND/OR C. C.	0.9182	6.7	27
133	005	M	ATHEROSCLEROSIS AGE <70 W/O C. C.	0.8599	5.2	25
134	005	M	HYPERTENSION	0.7049	6.1	26
135	005	M	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE >69 AND/OR C. C.	0.9922	6.1	26
136	005	M	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 18-69 W/O C. C.	0.9674	4.9	25
137	005	M	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 0-17	0.6381	3.3	20
138	005	M	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE >69 AND/OR C.	0.9297	5.7	26
139	005	M	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE <70 W/O C. C.	0.8303	4.8	23
140	005	M	ANGINA PECTORIS	0.7548	5.5	21
141	005	M	SYNCOPE + COLLAPSE AGE >69 AND/OR C. C.	0.6475	5	21
142	005	M	SYNCOPE + COLLAPSE AGE <70 W/O C. C.	0.5680	4.3	18
143	005	M	CHEST PAIN	0.6814	4.4	19
144	005	M	OTHER CIRCULATORY DIAGNOSES WITH C. C.	1.1267	7	27
145	005	M	OTHER CIRCULATORY DIAGNOSES W/O C. C.	1.0020	6.4	26
146	006	S	RECTAL RESECTION AGE >69 AND/OR C. C.	2.7082	19.1	39
147	006	S	RECTAL RESECTION AGE <70 W/O C. C.	2.5087	17.9	38
148	006	S	MAJOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C. C.	2.5493	17	37
149	006	S	MAJOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C. C.	2.2154	15.2	35
150	006	S	PERITONEAL ADHESIOLYSIS AGE >69 AND/OR C. C.	2.3746	15.3	35
151	006	S	PERITONEAL ADHESIOLYSIS AGE <70 W/O C. C.	2.0274	13.4	33
152	006	S	MINOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C. C.	1.4851	10.6	31
153	006	S	MINOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C. C.	1.2599	9.3	29
154	006	S	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE >69 AND/OR C.	2.6901	14.8	35
155	006	S	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 18-69 W/O C. C.	2.3336	13	33
156	006	S	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 0-17	0.8470	6	20
157	006	S	ANAL PROCEDURES AGE >69 AND/OR C. C.	0.7985	6	25
158	006	S	ANAL PROCEDURES AGE <70 W/O C. C.	0.6408	5.2	19
159	006	S	HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE >69 AND/OR C	0.9297	7.1	23
160	006	S	HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE 18-69 W/O C.	0.7676	6	18
161	006	S	INGUINAL + FEMORAL HERNIA PROCEDURES AGE >69 AND/OR C. C.	0.7068	5.7	16
162	006	S	INGUINAL + FEMORAL HERNIA PROCEDURES AGE 18-69 W/O C. C.	0.5854	4.8	12
163	006	S	HERNIA PROCEDURES AGE 0-17	0.4358	2.1	6
164	006	S	APPENDECTOMY WITH COMPLICATED PRINC. DIAG AGE>69 AND/OR C. C	1.8320	11.9	32
165	006	S	APPENDECTOMY WITH COMPLICATED PRINC. DIAG AGE <70 W/O C. C.	1.6154	11.3	29
166	006	S	APPENDECTOMY W/O COMPLICATED PRINC. DIAG AGE >69 AND/OR C. C	1.4328	9.4	29
167	006	S	APPENDECTOMY W/O COMPLICATED PRINC. DIAG AGE <70 W/O C. C.	1.0818	7.4	22
168	006	S	PROCEDURES ON THE MOUTH AGE >65 AND/OR C.C.	0.8631	4.3	24
169	006	S	PROCEDURES ON THE MOUTH AGE <70 W/O C. C.	0.8992	4.2	24
170	006	S	OTHER DIGESTIVE SYSTEM PROCEDURES AGE >69 AND/OR C. C.	2.6602	14.6	35
171	006	S	OTHER DIGESTIVE SYSTEM PROCEDURES AGE <70 W/O C. C.	2.3976	13.3	33
172	006	M	DIGESTIVE MALIGNANCY AGE >69 AND/OR C. C.	1.2268	8.2	28

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
173	006	M	DIGESTIVE MALIGNANCY AGE <70 W/O C. C.	1.0517	6.7	27
174	006	M	HEMORRHAGE AGE >69 AND/OR C. C.	0.9281	6.7	27
175	006	M	G.I. HEMORRHAGE AGE <70 W/O C. C.	0.8236	5.8	24
176	006	M	COMPLICATED PEPTIC ULCER	1.2438	8.1	28
177	006	M	UNCOMPLICATED PEPTIC ULCER >69 AND/OR C. C.	0.7422	6.6	24
178	006	M	UNCOMPLICATED PEPTIC ULCER <70 W/O C. C.	0.6141	5.5	20
179	006	M	INFLAMMATORY BOWEL DISEASE	1.0153	8	28
180	006	M	G.I. OBSTRUCTION AGE >69 AND/OR C. C.	0.8197	6.2	26
181	006	M	G.I. OBSTRUCTION AGE <70 W/O C. C.	0.7845	5.9	26
182	006	M	ESOPHAGITIS, GASTROENT, + MISC. DIGEST. DIS AGE >69 +/-OR C.	0.6185	5.4	22
183	006	M	ESOPHAGITIS, GASTROENT. + MISC. DIGEST, DIS AGE 18-69 W/O C.	0.5652	4.8	19
184	006	M	ESOPHAGITIS, GASTROENTERITIS + MISC. DIGEST. DISORDERS AGE 0	0.3822	3.3	11
185	006	M	DENTAL + ORAL DIS, EXC EXTRACTIONS + RESTORATIONS, AGE >17	0.6681	4.2	24
186	006	M	DENTAL + ORAL DIS, EXC EXTRACTIONS + RESTORATIONS, AGE 0-17	0.4155	2.9	11
187	006	M	DENTAL EXTRACTIONS + RESTORATIONS	0.3990	2.7	8
188	006	M	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >69 AND/OR C. C.	0.7444	5.1	25
189	006	M	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 18-69 W/O C. C.	0.6576	4.5	23
190	006	M	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	0.3379	2.1	8
191	007	S	MAJOR PANCREAS, LIVER + SHUNT PROCEDURES	4.1791	20.8	41
192	007	S	MINOR PANCREAS, LIVER + SHUNT PROCEDURES	3.9197	20.1	40
193	007	S	BILIARY TRACT PROC EXC TCT CHOLECYSTECTOMY AGE >69 +/-OR C. C	2.4513	17.3	37
194	007	S	BILIARY TRACT PROC EXC TOT CHOLECYSTECTOMY AGE <70 W/O C. C.	1.9881	13.9	34
195	007	S	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE >69 AND/OR C. C.	2.1690	16	36
196	007	S	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE <70 W/O C. C.	2.0594	15.8	36
197	007	S	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE >69 AND/OR C. C.	1.4868	11.5	29
198	007	S	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE <70 W/O C. C.	1.2752	10.1	24
199	007	S	HEPATOBIILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	2.4574	17.9	38
200	007	S	HEPATOBIILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	2.5818	15.1	35
201	007	S	OTHER HEPATOBIILIARY OR PANCREAS O.R. PROCEDURES	2.7291	16.9	37
202	007	M	CIRRHOSIS + ALCOHOLIC HEPATITIS	1.1965	9.3	29
203	007	M	MALIGNANCY OF HEPATOBIILIARY SYSTEM OR PANCREAS	1.0937	8	28
204	007	M	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	0.9682	7.5	28
205	007	M	DISORDERS OF LIVER EXC MALIG, CIRRH, ALC HEPA AGE >69 AND/OR	1.0822	7.9	28
206	007	M	DISORDERS OF LIVER EXC MALIG, CIRRH, ALC HEPA AGE <70 W/O C.	0.9247	6.8	27
207	007	M	DISORDERS OF THE BILIARY TRACT AGE >69 AND/OR C. C.	0.8492	6.6	27
208	007	M	DISORDERS OF THE BILIARY TRACT AGE <70 W/O C. C.	0.7315	5.5	24
209	008	S	MAJOR JOINT PROCEDURES	2.2912	17.1	37
210	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >69 AND/OR C.	2.0833	17.8	38
211	008	S	HIP + FEMURE PROCEDURES EXCEPT MAJOR JOINT AGE 18-69 W/O C.	1.9530	15.9	36
212	008	S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	1.7132	11.1	31
213	008	S	AMPUTATIONS FOR MUSCULOSKELETAL SYSTEM + CONN. TISSUE DISORD	2.1315	14.3	34
214	008	S	BACK + NECK PROCEDURES AGE >69 AND/OR C. C.	1.8427	15.6	36
215	008	S	BACK + NECK PROCEDURES AGE <70 W/O C. C.	1.4920	13	33

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
216	008	S	BIOPSIES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	1.5596	11.3	31
217	008	S	WND DEBRID + SKN GRFT EXC HAND, FOR MUSCULOSKELETAL + CONN.	2.2824	13.1	33
218	008	S	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE >69 +/-OR	1.4250	10.9	31
219	008	S	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE 18-69 W/O	1.0790	8.3	27
220	008	S	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE 0-17	0.9339	5.3	25
221	008	S	KNEE PROCEDURES AGE >69 AND/OR C. C.	1.2727	8.3	28
222	008	S	KNEE PROCEDURES AGE <70 W/O C. C.	0.9897	6.4	26
223	008	S	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE >69 AND/OR C. C.	1.0723	6.9	27
224	008	S	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE <70 W/O C. C.	0.8952	5.6	24
225	008	S	FOOT PROCEDURES	0.6476	4.8	15
226	008	S	SOFT TISSUE PROCEDURES AGE >69 AND/OR C. C.	0.7984	5.1	25
227	008	S	SOFT TISSUE PROCEDURES AGE <70 W/O C. C.	0.6337	4.2	18
228	008	S	GANGLION (HAND) PROCEDURES	0.3626	2.2	7
229	008	S	HAND PROCEDURES EXCEPT GANGLION	0.5998	3.4	14
230	008	S	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES OF HIP + FEMUR	1.3594	8.9	29
231	008	S	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES EXCEPT HIP + FEM	0.9519	5.3	25
232	008	S	ARTHROSCOPY	0.6063	3.6	15
233	008	S	OTHER MUSCULOSKELET SYS + CONN TISS O.R. PROC AGE >69 +/-OR C	1.7737	13.1	33
234	008	S	OTHER MUSCULOSKELET SYS + CONN TISS O.R. PROC AGE <70 W/O C.	1.2454	8.2	28
235	008	M	FRACTURES OF FEMUR	1.7586	13.6	34
236	008	M	FRACTURES OF HIP + PELVIS	1.3855	11.9	32
237	008	M	SPRAINS, STRAINS, + DISLOCATIONS OF HIP, PELVIS + THIGH	0.7929	6.4	26
238	008	M	OSTEOMYELITIS	1.5511	12.3	32
239	008	M	PATHOLOGICAL FRACTURES + MUSCULOSKELETAL + CONN. TISS. MALIG	1.0979	9.2	29
240	008	M	CONNECTIVE TISSUE DISORDERS AGE >69 AND/OR C. C.	0.9709	8.6	29
241	008	M	CONNECTIVE TISSUE DISORDERS AGE <70 W/O C. C.	0.9048	8	28
242	008	M	SEPTIC ARTHRITIS	1.5880	11.2	31
243	008	M	MEDICAL BACK PROBLEMS	0.7551	7.5	28
244	008	M	BONE DISEASES + SEPTIC ARTHROPATHY AGE >69 AND/OR C. C.	0.7792	7.5	28
245	008	M	BONE DISEASES + SEPTIC ARTHROPATHY AGE <70 W/O C. C.	0.7177	6.3	26
246	008	M	NON-SPECIFIC ARTHROPATHIES	0.7147	6.8	27
247	008	M	SIGNS + SYMPTOMS OF MUSCULOSKELETAL SYSTEM + CONN TISSUE	0.6559	5.8	26
248	008	M	TENDONITIS, MYOSITIS + BURSITIS	0.6136	5.4	24
249	008	M	AFTERCARE, MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	1.0203	7.6	28
250	008	M	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE >69 +/-OR	0.7428	6	26
251	008	M	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE 18-69 W/O	0.5964	4.2	24
252	008	M	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE 0-17	0.3533	1.8	7
253	008	M	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE >69 +/-O	0.7466	6.6	27
254	008	M	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE 18-69 W	0.6258	5.3	25
255	008	M	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE 0-17	0.4687	2.9	15
256	008	M	OTHER DIAGNOSES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSU	0.8706	6.5	27
257	009	S	TOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C. C.	1.1085	9.3	23
258	009	S	TOTAL MASTECTOMY FOR MALIGNANCY AGE <70 W/O C. C.	1.0729	8.9	21

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
259	009	S	SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C. C.	1.0141	7.4	27
260	009	S	SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE <70	0.9325	6.4	26
261	009	S	BREAST PROC FOR NON-MALIG EXCEPT BIOPSY + LOC EXC	0.7329	4.8	19
262	009	S	BREAST BIOPSY + LOCAL EXCISION FOR NON-MALIGNANCY	0.4617	3	10
263	009	S	SKIN GRAFTS FOR SKIN ULCER OR CELLULITIS AGE >69 AND/OR C. C	2.4737	21.3	41
264	009	S	SKIN GRAFTS FOR SKIN ULCER OR CELLULITIS AGE <70 W/O C. C.	2.2031	18.2	38
265	009	S	SKIN GRAFTS EXCEPT FOR SKIN ULCER OR CELLULITIS WITH C. C.	1.4959	8.6	29
266	009	S	SKIN GRAFTS EXCEPT FOR SKIN ULCER OR CELLULITIS W/O C. C.	0.9485	5.9	26
267	009	S	PERIANAL + PILONICAL PROCEDURES	0.6113	5	18
268	009	S	SKIN, SUBCUTANEOUS TISSUE + BREAST PLASTIC PROCEDURES	0.5388	3	15
269	009	S	OTHER SKIN, SUBCUT TISS + BREAST O.R. PROC AGE >69 +/-OR C. C	0.9947	5.7	26
270	009	S	OTH SKIN, SUBCUT TISS + BREAST O.R. PROC AGE <70 W/O C. C.	0.8123	4.5	25
271	009	M	SKIN ULCERS	1.3802	12.1	32
272	009	M	MAJOR SKIN DISORDERS AGE >69 AND/OR C. C.	0.8620	7.8	28
273	009	M	MAJOR SKIN DISORDERS AGE <70 W/O C. C.	0.8286	7.3	27
274	009	M	MALIGNANT BREAST DISORDERS AGE >69 AND/OR C. C.	1.0108	7.5	28
275	009	M	MALIGNANT BREAST DISORDERS AGE <70 W/O C. C.	0.9014	6.4	26
276	009	M	NON-MALIGNANT BREAST DISORDERS	0.6066	4.2	22
277	009	M	CELLULITIS AGE >69 AND/OR C. C.	0.8863	8.3	28
278	009	M	CELLULITIS AGE 18-69 W/O C. C.	0.8096	7.2	27
279	009	M	CELLULITIS AGE 0-17	0.4789	4.2	13
280	009	M	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE >69 +/-OR C. C.	0.6201	5.4	25
281	009	M	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 18-69 W/O C. C.	0.5377	4.2	23
282	009	M	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 0-17	0.3460	2.2	9
283	009	M	MINOR SKIN DISORDERS AGE >69 AND/OR C. C.	0.6394	5.3	25
284	009	M	MINOR SKIN DISORDERS AGE <70 W/O C. C.	0.5971	4.4	24
285	010	S	AMPUTATIONS FOR ENDOCRINE, NUTRITIONAL + METABOLIC DISORDERS	2.8658	24	44
286	010	S	ADRENAL + PITUITARY PROCEDURES	2.8952	16.1	36
287	010	S	SKIN GRAFTS + WOUND DEBRIDE FOR ENDOC, NUTRIT + METAB DISORD	2.8143	22.8	43
288	010	S	C.R. PROCEDURES FOR OBESITY	1.5695	10	24
289	010	S	PARATHYROID PROCEDURES	1.3736	8.3	28
290	010	S	THYROID PROCEDURES	0.8549	6	17
291	010	S	THYROGLOSSAL PROCEDURES	0.4909	2.9	8
292	010	S	OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE >69 + OR C. C.	2.0307	10.8	31
293	010	S	OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE <70 W/O C. C.	1.4951	8	28
294	010	M	DIABETES AGE =>36	0.8087	7.7	28
295	010	M	DIABETES AGE 0-35	0.7457	5.6	26
296	010	M	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE >69 AND/OR C. C.	0.8979	7.3	27
297	010	M	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 18-69 W/O C. C.	0.7923	6	26
298	010	M	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 0-17	0.7538	5.4	25
299	010	M	INBORN ERRORS OF METABOLISM	0.9407	6.8	27
300	010	M	ENDOCRINE DISORDERS AGE >69 AND/OR C. C.	0.9731	7.8	28
301	010	M	ENDOCRINE DISORDERS AGE <70 W/O C. C.	0.8143	6.4	26

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
302	011	S	KIDNEY TRANSPLANT	4.2279	24.1	44
303	011	S	KIDNEY, URETER + MAJOR BLADDER PROCEDURE FOR NEOPLASM	2.5397	16.2	36
304	011	S	KIDNEY, URETER + MAJ BLDRPROC FOR NON-MALIG AGE >69 +/-OR C.	1.7952	12.8	33
305	011	S	KIDNEY, URETER + MAJ BLDR PROC FOR NON-MALIG <70 W/O C. C.	1.7043	11.9	32
306	011	S	PROSTATECTOMY AGE >69 AND/OR C. C.	1.1399	8.6	29
307	011	S	PROSTATECTOMY AGE <70 W/O C. C.	0.9513	7.2	26
308	011	S	MINOR BLADDER PROCEDURES AGE >69 AND/OR C. C.	1.0441	7.1	27
309	011	S	MINOR BLADDER PROCEDURES AGE <70 W/O C. C.	0.9290	5.7	26
310	011	S	TRANSURETHRAL PROCEDURES AGE >69 AND/OR C. C.	0.7071	4.9	20
311	011	S	TRANSURETHRAL PROCEDURES AGE <70 W/O C. C.	0.5871	4.1	15
312	011	S	URETHRAL PROCEDURES, AGE >69 AND/OR C. C.	0.7424	5.2	22
313	011	S	URETHRAL PROCEDURES, AGE 18-69 W/O C. C.	0.6897	5.1	21
314	011	S	URETHRAL PROCEDURES, AGE 0-17	0.4368	2.3	11
315	011	S	OTHER KIDNEY + URINARY TRACT O.R. PROCEDURES	2.4884	9.8	30
316	011	M	RENAL FAILURE	1.3314	6.7	27
317	011	M	ADMIT FOR RENAL DIALYSIS	0.2385	1.2	3
318	011	M	KIDNEY + URINARY TRACT NEOPLASMS AGE >69 AND/OR C. C.	0.9142	5.5	26
319	011	M	KIDNEY + URINARY TRACT NEOPLASMS AGE <70 W/O C. C.	0.7942	4.2	24
320	011	M	KIDNEY + URINARY TRACT INFECTIONS AGE >69 AND/OR C. C.	0.8123	7	27
321	011	M	KIDNEY + URINARY TRACT INFECTIONS AGE 18-69 W/O C. C.	0.6803	5.6	23
322	011	M	KIDNEY + URINARY TRACTINFECTIONS AGE 0-17	0.4553	3.7	13
323	011	M	URINARY STONES AGE >69 AND/OR C. C.	0.7131	4.9	25
324	011	M	URINARY STONES AGE <70 W/O C. C.	0.5472	3.9	19
325	011	M	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE>69 AND/OR C. C.	0.7247	5.4	25
326	011	M	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 18-69 W/O C. C.	0.5875	4.3	21
327	011	M	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 0-17	0.5027	3.1	14
328	011	M	URETHRAL STRICTURE AGE >69 ND/OR C. C.	0.6508	4.8	22
329	011	M	URETHRAL STRICTURE AGE 18-65 W/O C. C.	0.5326	3.9	17
330	011	M	URETHRAL STRICTURE AGE 0-17	0.2817	1.6	5
331	011	M	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE >69 AND/OR C. C.	0.8919	6.3	26
332	011	M	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 18-69 W/O C. C.	0.7763	5	25
333	011	M	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 0-17	0.5146	3.2	18
334	012	S	MAJOR MALE PELVIC PROCEDURES WITH C. C.	1.5612	12.7	30
335	012	S	MAJOR MALE PELVIC PROCEDURES W/O C. C.	1.3590	11.8	29
336	012	S	TRANSURETHRAL PROSTATECTOMY AGE >69 AND/OR C. C.	1.0079	8.4	22
337	012	S	TRANSURETHRAL PROSTATECTOMY AGE <70 W/O C. C.	0.8491	7.2	17
338	012	S	TESTES PROCEDURES, FOR MALIGNANCY	0.9096	6.3	26
339	012	S	TESTES PROCEDURES, NON-MALIGNANT AGE >17	0.6093	4.5	15
340	012	S	TESTES PROCEDURES, NON-MALIGNANT AGE 0-17	0.4381	2.4	7
341	012	S	PENIS PROCEDURES	0.9983	6	23
342	012	S	CIRCUMCISION AGE >17	0.4228	2.8	10
343	012	S	CIRCUMCISION AGE 0-17	0.3828	1.7	4
344	012	S	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANC	1.1204	7.4	27

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983	1983	1983
				RELATIVE	ALOS	CUT
				WEIGHT		OFF
345	012	S	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIG	0.8334	5.6	26
346	012	M	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE >69 AND/OR C. C.	0.9395	6.9	27
347	012	M	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE <70 W/O C. C.	0.8304	5.7	26
348	012	M	BENIGN PROSTATIC HYPERTROPHY AGE >69 AND/OR C. C.	0.8864	6.2	26
349	012	M	BENIGN PROSTATIC HYPERTROPHY AGE <70 W/O C. C.	0.6998	4.9	22
350	012	M	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	0.6096	5.2	20
351	012	M	STERILIZATION, MALE	0.2655	1.3	3
352	012	M	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	0.6385	4.4	20
353	013	S	PELVIC EVISCERATION, RADICAL HYSTERECTOMY + VULVECTOMY	1.9376	12.4	32
354	013	S	NON-RADICAL HYSTERECTOMY AGE >69 AND/OR C. C.	1.1108	9.6	20
355	013	S	NON-RADICAL HYSTERECTOMY AGE <70 W/O C. C.	1.0156	8.8	17
356	013	S	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	0.8460	8.1	18
357	013	S	UTERUS + ADENEXA PROCEDURES, FOR MALIGNANCY	1.9188	13.9	34
358	013	S	UTERUS + ADENEXA PROC FOR NON-MALIGNANCY EXCEPT TUBAL INTERR	1.0890	8	218
359	013	S	TUBAL INTERRUPTION FOR NON-MALIGNANCY	0.4279	2.3	7
360	013	S	VAGINA, CERVIC + VULVA PROCEDURES	0.5985	4.2	19
361	013	S	LAPAROSCOPY + ENDOSCOPY (FEMALE) EXCEPT TUBAL INTERRUPTION	0.4864	2.6	10
362	013	S	LAPAROSCOPIC TUBAL INTERRUPTION	0.3126	1.4	3
363	013	S	D + C, CONIZATION + RADIO-IMPLNT, FOR MALIGNANCY	0.6516	4.3	18
364	013	S	D+C, CONIZATION EXCEPT FOR MALIGNANCY	0.4028	2.6	9
365	013	S	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	1.7965	12.7	33
366	013	M	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE >69 AND/OR C. C.	0.8444	5.2	25
367	013	M	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE <70 W/O C. C.	0.5786	3.5	24
368	013	M	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	0.7944	6.7	27
369	013	M	MENSTRUUAL + OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	0.6959	5.1	25
71	14	S	CAESAREAN SECTION WITH C. C.	0.9912	7.6	15
72	14	S	CAESAREAN SECTION W/O C. C.	0.7535	6.1	10
73	14	S	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES	0.5534	3.8	9
74	14	S	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	0.4063	3.2	9
75	14	S	VAGINAL DELIVERY WITH STERILIZATION AND/OR D+C	0.5492	3.6	7
76	14	S	HYSTERECTOMY + D+C, O.R. PROC EXCEPT STERIL AND/OR D+C	0.6889	4.4	15
77	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.4158	2.9	10
78	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.4761	2.2	8
79	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.8094	5.5	11
80	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.3169	2.2	8
81	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.2705	1.5	4
82	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.3602	1.4	4
83	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.1842	1.2	2
84	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.4317	3.4	14
85	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.3245	2.2	9
86	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	0.6883	1.8	14
87	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	3.6863	17.9	38
88	14	S	HYSTERECTOMY + D+C, O.R. PROCEDURE	1.8459	13.3	33

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
388	015		PREMATURITY W/O MAJOR PROBLEMS	1.1693	8.6	29
389	015		FULL TERM NEONATE WITH MAJOR PROBLEMS	0.5482	4.7	16
390	015		NEONATES WITH OTHER SIGNIFICANT PROBLEMS	0.3523	3.4	9
391	015		NORMAL NEWBORNS	0.2241	3.1	7
392	016	S	SPLENECTOMY AGE >17	2.7746	16.4	36
393	016	S	SPLENECTOMY AGE 0-17	1.5366	9.1	29
394	016	S	OTHER O.R. PROCEDURES OF THE BLOOD + BLOOD FORMING ORGANS	1.1146	6.1	26
395	016	M	RED BLOOD CELL DISORDERS AGE >17	0.7839	6.1	26
396	016	M	RED BLOOD CELL DISORDERS AGE 0-17	0.6295	4.1	18
397	016	M	COAGULATION DISORDERS	0.9863	6.7	27
398	016	M	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE >69 AND/OR C. C.	0.8900	6.1	26
399	016	M	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE <70 W/O C. C.	0.8459	5.6	26
400	017	S	LYMPHOMA OR LEUKEMIA WITH MAJOR O.R. PROCEDURE	2.8272	16.9	37
401	017	S	LYMPHOMA OR LEUKEMIA WITH MINOR O.R. PROC AGE >69 AND/OR C.	1.2409	8.9	29
402	017	S	LYMPHOMA OR LEUKEMIA WITH MINOR O.R. PROCEDURE AGE <70 W/O C	1.1316	7.1	27
403	017	M	LYMPHOMA OR LEUKEMIA AGE >69 AND/OR C. C.	1.1715	7.1	27
404	017	M	LYMPHOMA OR LEUKEMIA AGE 18-69 W/O C. C.	1.1787	6.4	26
405	017	M	LYMPHOMA OR LEUKEMIA AGE 0-17	1.0517	4.9	25
406	017	S	MYELOPROLIF DISORD OR POORLY DIFF NEOPLASM W MAJ O.R. PROC +	2.2671	15	35
407	017	S	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O	2.1366	13.3	33
408	017	S	MYELOPROLIF DISORD OR POORLY DIFF NEOPL WITH MINOR O.R. PROC	1.1389	7.1	27
409	017	M	RADIOTHERAPY	0.8134	5.7	26
410	017	M	CHEMOTHERAPY	0.3527	2.6	12
411	017	M	HISTORY OF MALIGNANCY W/O ENDOSCOPY	0.7221	4.7	25
412	017	M	HISTORY OF MALIGNANCY WITH ENDOSCOPY	0.3400	2	8
413	017	M	OTHER MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE/69 +/-OR	1.0975	7.3	27
414	017	M	OTHR MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE<70 W/O C	1.0359	6.4	26
415	018	S	O.R. PROCEDURE FOR INFECTIONS + PARASITIC DISEASES	3.0027	15.1	35
416	018	M	SEPTCEMIA AGE >17	1.5504	9.2	29
417	018	M	SEPTCEMIA AGE 0-17	0.7152	5.2	20
418	018	M	POSTOPERATIVE + POST-TRAUMATIC INFECTIONS	0.9968	8.4	28
419	018	M	FEVER OF UNKNOWN ORIGIN AGE >65 AND/OR C. C.	0.8628	6.9	27
420	018	M	FEVER OF UNKNOWN ORIGIN AGE 18-69 W/O C. C.	0.8022	6.2	26
421	018	M	VIRAL ILLNESS AGE >17	0.6045	5.4	21
422	018	M	VIRAL ILLNESS + FEVER OF UNKNOWN ORIGIN AGE 0-17	0.4360	3.2	10
423	018	M	OTHER INFECTIOUS + PARASITIC DISEASES DIAGNOSES	1.2107	8.8	29
424	019	S	O.R. PROCEDURES WITH PRINCIPAL DIAGNOSIS OF MENTAL ILLNESS	2.1938	14.2	34
425	019	M	ACUTE ADJUST REACT + DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION	0.6812	5.8	26
426	019	M	DEPRESSIVE NEUROSES	0.9495	9.4	29
427	019	M	NEUROSES EXCEPT DEPRESSIVE	0.7678	6.9	27
428	019	M	DISORDERS OF PERSONALITY + IMPULSE CONTROL	0.9741	8.3	28
429	019	M	ORGANIC DISTURBANCES + MENTAL RETARDATION	0.9523	8.8	29
430	019	M	PSYCHOSES	1.0934	10.8	31

DIAGNOSIS RELATED GROUPS AND RELATIVE WEIGHTS

DRG	MDC	TYPE	TITLE	HCFA	HCFA	HCFA
				1983 RELATIVE WEIGHT	1983 ALOS	1983 CUT OFF
431	019	M	CHILDHOOD MENTAL DISORDERS	2.2519	15.4	35
432	019	M	OTHER DIAGNOSES OF MENTAL DISORDERS	1.0525	7.2	27
433	020		SUBSTANCE USE + SUBST INDUCED ORGANIC MENTAL DISORDERS, LEFT	0.4457	2.5	17
434	020		DRUG DEPENDENCE	1.0404	9.1	29
435	020		DRUG USE EXCEPT DEPENDENCE	1.0738	8	28
436	020		ALCOHOL DEPENDENCE	0.8853	8.1	28
437	020		ALCOHOL USE EXCEPT DEPENDENCE	0.6183	3.5	24
438	020		ALCOHOL + SUBSTANCE INDUCED ORGANIC MENTAL SYNDROME	0.8420	6.9	27
439	021	S	SKIN GRAFTS FOR INJURIES	1.8219	8.9	29
440	021	S	WOUND DEBRIGEMENTS FOR INJURIES	1.4807	7.2	27
441	021	S	HAND PROCEDURES FOR INJURIES	0.7180	3	16
442	021	S	OTHER O.R. PROCEDURES FOR INJURIES AGE >69 AND/OR C. C.	1.9026	9.1	29
443	021	S	OTHER O.R. PROCEDURES FOR INJURIES AGE <70 W/O C. C.	1.5211	6.6	27
444	021	M	MULTIPLE TRAUMA AGE >69 AND/OR C. C.	0.8830	6.7	27
445	021	M	MULTIPLE TRAUMA AGE 18-65 W/O C. C.	0.7530	5.2	25
446	021	M	MULTIPLE TRAUMA AGE 0-17	0.4846	2.4	10
447	021	M	ALLERGIC REACTIONS AGE >17	0.4785	3.7	19
448	021	M	ALLERGIC REACTIONS AGE 0-17	0.3505	2.9	9
449	021	M	TOXIC EFFECTS OF DRUGS AGE >69 AND/OR C. C.	0.7331	5.6	26
450	021	M	TOXIC EFFECTS OF DRUGS AGE 18-69 W/O C. C.	0.5957	3.9	23
451	021	M	TOXIC EFFECTS OF DRUGS AGE 0-17	0.2912	2.1	8
452	021	M	COMPLICATIONS OF TREATMENT AGE >69 AND/OR C. C.	0.8492	5.5	26
453	021	M	COMPLICATIONS OF TREATMENT AGE <70 W/O C. C.	0.9020	5.1	25
454	021	M	OTHER INJURIES, POISONINGS + TOXIC EFFDIAG AGE >69 AND/OR C.	0.8224	5.3	25
455	021	M	OTHER INJURIES, POISONINGS + TOXIC EFF DIAG AGE <70 W/O C. C	0.6185	3.5	22
456	022		BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	2.0902	11.6	32
457	022		EXTENSIVE BURNS	6.8631	12.6	33
458	022	S	NON-EXTENSIVE BURNS WITH SKIN GRAFTS	2.8572	18.3	38
459	022	S	NON-EXTENSIVE BURNS WITH WOUND DEBRIDEMENT + OTHER O.R. PROC	2.7568	12.7	33
460	022	M	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1.4225	9	29
461	023	S	O.R. PROC WITH DIAGNOSES OF OTHER CONTACT WITH HEALTH SERVIC	1.6507	8	28
462	023	M	REHABILITATION	1.8268	13.5	34
463	023	M	SIGNS + SYMPTOMS WITH C. C.	0.7702	6.3	26
464	023	M	SIGNS + SYMPTOMS W/O C. C.	0.7322	6	26
465	023	M	AFTERCARE WITH HISTORY OF MALIGNANCY AS SECONDARY DX	0.2071	1.5	4
466	023	M	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DX	0.6377	3.7	24
467	023	M	OTHER FACTORS INFLUENCING HEALTH STATUS	0.9799	6.1	26
468	023	M	UNRELATED OR PROCEDURE	2.1037	11.2	31
469	0	O	PRIM DX INVALID AS DISCHARGE DIAGNOSIS	0.0000	0	
470	0	O	UNGROUPABLE	0.0000	0	0

E. MAJOR DIAGNOSTIC CATEGORIES

- 1 Diseases and Disorders of the Nervous System
- 2 Diseases and Disorders of the Eye
- 3 Diseases and Disorders of the Ear, Nose and Throat
- 4 Diseases and Disorders of the Respiratory System
- 5 Diseases and Disorders of the Circulatory System
- 6 Diseases and Disorders of the Digestive System
- 7 Diseases and Disorders of the Hepatobiliary System and Pancreas
- 8 Diseases of the Musculoskeletal System and Connective Tissue
- 9 Diseases of the Skin, Subcutaneous Tissue and Breast
- 10 Endocrine, Nutritional and Metabolic Diseases
- 11 Diseases and Disorders of the Kidney and Urinary Tract
- 12 Diseases and Disorders of the Male Reproductive System
- 13 Diseases and Disorders of the Female Reproductive System
- 14 Pregnancy, Childbirth and the Puerperium
- 15 Normal Newborns and Other Neonates with Certain Conditions Originating
in Perinatal Period
- 16 Diseases and Disorders of the Blood and Blood-Forming Organs and
Immunological Disorders
- 17 Myeloproliferative Disorders and Poorly Differentiated Malignancy
- 18 Infectious and Parasitic Diseases (Systemic)
- 19 Mental Disorders
- 20 Substance Use and Substance Induced Organic Disorders
- 21 Injury, Poisoning, and Toxic Effect of Drugs
- 22 Burns
- 23 Selected Factors Influencing Health Status and Contact with Health
Services

F. ICD-9 AND ICPM CODE BY CODE CONVERSION TO ICD-9-CM

This document has been printed separately because of its size.

G. DISTRIBUTION OF AMEDD FY83 DATA BY DRG THROUGH MAP CHANGES

DRG#	MDC	TYPE	TITLE	Version I	Version II	Version III	Version IV	Version V	Version VI
1	001	S	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	0	256	256	251	253	253
2	001	S	CRANIOTOMY FOR TRAUMA AGE >17	0	134	134	85	85	85
3	001	S	CRANIOTOMY AGE <18	0	128	128	127	126	126
4	001	S	SPINAL PROCEDURES	0	110	110	88	91	91
5	001	S	EXTRACRANIAL VASCULAR PROCEDURES	0	242	242	241	241	241
6	001	S	CARPAL TUNNEL RELEASE	0	0	0	1028	1028	1028
7	001	S	PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE >69 +/-OR C	0	133	140	54	54	53
8	001	S	PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE <70 W/O C.	0	1227	1273	310	313	313
9	001	M	SPINAL DISORDERS + INJURIES	207	135	137	158	158	158
10	001	M	NERVOUS SYSTEM NEOPLASMS AGE >69 AND/OR C. C.	31	101	101	104	104	104
11	001	M	NERVOUS SYSTEM NEOPLASMS AGE <70 W/O C. C.	368	133	133	140	140	140
12	001	M	DEGENERATIVE NERVOUS SYSTEM DISORDERS	510	457	461	456	454	460
13	001	M	MULTIPLE SCLEROSIS + CEREBELLAR ATAXIA	341	336	338	338	338	339
14	001	M	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1232	1078	1088	1103	1103	1109
15	001	M	TRANSIENT ISCHEMIC ATTACKS	950	699	699	699	699	700
16	001	M	NONSPECIFIC CEREBROVASCULAR DISORDERS WITH C. C.	0	80	82	76	80	81
17	001	M	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O C. C.	292	185	186	174	189	191
18	001	M	CRANIAL + PERIPHERAL NERVE DISORDERS AGE >69 AND/OR C. C.	89	148	142	146	150	152
19	001	M	CRANIAL + PERIPHERAL NERVE DISORDERS AGE <70 W/O C. C.	2499	918	928	933	1019	1023
20	001	M	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	866	831	832	833	398	397
21	001	M	VIRAL MENINGITIS	450	448	448	449	449	449
22	001	M	HYPERTENSIVE ENCEPHALOPATHY	6	6	6	6	6	6
23	001	M	NONTRAUMATIC STUPOR + COMA	55	54	54	55	55	55
24	001	M	SEIZURE + HEADACHE AGE >69 AND/OR C. C.	54	408	369	373	381	388
25	001	M	SEIZURE + HEADACHE AGE 18-69 W/O C. C.	2552	2150	2193	2190	2344	2354
26	001	M	SEIZURE + HEADACHE AGE 0-17	1064	1061	1060	1062	1070	1068
27	001	M	TRAUMATIC STUPOR + COMA, COMA>1 HR	0	0	0	0	0	0
28	001	M	TRAUMATIC STUPOR + COMA, COMA <1 HR AGE >69 AND/OR C. C.	45	534	598	668	663	662
29	001	M	TRAUMATIC STUPOR + COMA <1 HR AGE 18-69 W/O C. C.	2865	1883	1947	1975	1981	1982
30	001	M	TRAUMATIC STUPOR + COMA <1 HR AGE 0-17	929	876	889	893	892	891
31	001	M	CONCUSSION AGE >65 AND/OR C. C.	2	91	104	106	107	107
32	001	M	CONCUSSION AGE 18 - 69 W/O C. C.	778	621	651	651	650	651
33	001	M	CONCUSSION AGE 0-17	221	217	220	220	220	220
34	001	M	OTHER DISORDERS OF NERVOUS SYSTEM AGE >69 AND/OR C. C.	20	166	170	184	177	181
35	001	M	OTHER DISORDERS OF NERVOUS SYSTEM AGE <70 W/O C. C.	893	563	560	591	585	586
36	002	S	RETINAL PROCEDURES	0	313	313	347	380	382
37	002	S	ORBITAL PROCEDURES	0	143	143	138	137	137
38	002	S	PRIMARY IRIS PROCEDURES	0	24	24	27	105	105
39	002	S	LENS PROCEDURES	0	2067	2067	2064	2104	2104
40	002	S	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	0	1112	1112	1109	1104	1104
41	002	S	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	0	864	864	642	871	871
42	002	S	INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS + LENS	0	431	431	422	354	354
43	002	M	HYPERHAMA	220	210	212	224	224	224
44	002	M	ACUTE MAJOR EYE INFECTIONS	53	50	50	46	205	205
45	002	M	NEUROLOGICAL EYE DISORDERS	576	201	201	199	236	237
46	002	M	OTHER DISORDERS OF THE EYE AGE >17 WITH C.C	0	166	170	173	188	189
47	002	M	OTHER DISORDERS OF THE EYE AGE >17 W/O C.C	4694	1453	1451	1430	1444	1442
48	002	M	OTHER DISORDERS OF THE EYE AGE 0-17	1089	526	527	740	396	394
49	003	S	MAJOR HEAD + NECK PROCEDURES	0	96	96	94	94	96
50	003	S	SIALOADENECTOMY	0	154	154	154	0	0
51	003	S	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	0	27	27	27	181	181

DISTRIBUTION OF AMEDD FY83 DATA BY DRG THROUGH MAP CHANGES

DRG#	MOD	TYPE	TITLE	Version	Version	Version	Version	Version	Version
				I	II	III	IV	V	VI
50	003	S	LEFT LIP + PALATE REPAIR	0	76	76	76	76	76
53	003	I	SINUS + MASTOID PROCEDURES AGE >17	0	450	450	491	492	492
54	003	I	SINUS + MASTOID PROCEDURES AGE 0-17	0	57	57	67	67	67
55	003	S	MISCELLANEOUS EAR, NOSE + THROAT PROCEDURES	0	1293	1119	1129	1138	1139
56	003	S	RHINOPLASTY	0	1765	1765	1719	1719	1717
57	003	S	T + A PROC EXCEPT TONSILLECTOMY +/-OR ADENOIDECTOMY AGE >17	0	357	357	360	359	362
58	003	S	T + A PROC EXCEPT TONSILLECTOMY +/-OR ADENOIDECTOMY AGE 0-17	0	48	49	52	52	443
59	003	S	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE >17	0	914	916	908	909	906
60	003	S	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE 0-17	0	1427	1429	1421	1421	1030
61	003	S	MYRINGOTOMY AGE >17	0	0	0	0	0	77
62	003	S	MYRINGOTOMY AGE 0-17	0	0	0	0	0	2556
63	003	I	OTHER EAR, NOSE + THROAT O.R. PROCEDURES	0	291	304	289	232	209
64	003	M	EAR, NOSE + THROAT MALIGNANCY	513	284	309	311	333	333
65	003	M	DISSEQUILIBRIUM	360	340	340	339	350	351
66	003	M	EPISTAXIS	182	169	169	169	169	170
67	003	M	EPIGLOTTIS	38	32	38	38	38	38
68	003	M	OTITIS MEDIA + URI AGE >69 AND/OR C. C.	35	576	542	542	538	537
69	003	M	OTITIS MEDIA + URI AGE 18-65 W/O C. C.	19791	17733	17770	17770	17814	17785
70	003	M	OTITIS MEDIA + URI AGE 0-17	7009	5984	5984	5984	5989	3606
71	003	M	LARYNGOTRACHEITIS	333	323	332	332	332	332
72	003	M	NASAL TRAUMA + DEFORMITY	2083	366	371	372	373	372
73	003	M	OTHER EAR, NOSE + THROAT DIAGNOSES AGE >17	2448	1052	1103	1096	1079	1053
74	003	M	OTHER EAR, NOSE + THROAT DIAGNOSES AGE 0-17	1160	401	435	439	434	302
75	004	S	MAJOR CHEST PROCEDURES	0	1036	1036	479	478	496
76	004	S	O.R. PROC ON THE RESP SYSTEM EXCEPT MAJOR CHEST WITH C. C.	0	105	123	145	141	139
77	004	S	O.R. PROC ON THE RESP SYSTEM EXCEPT MAJOR CHEST W/O C. C.	0	180	162	193	204	191
78	004	M	PULMONARY EMBOLISM	187	177	177	178	178	180
79	004	M	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE >69 AND/OR C. C.	40	108	114	130	140	144
80	004	M	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 18-69 W/O C. C.	252	103	100	112	186	186
81	004	M	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 0-17	42	39	39	40	50	50
82	004	M	RESPIRATORY NEOPLASMS	1987	1361	1360	1443	1443	1464
83	004	M	MAJOR CHEST TRAUMA AGE >69 AND/OR C.C.	0	3	5	6	6	6
84	004	M	MAJOR CHEST TRAUMA AGE <70 W/O C. C.	32	15	13	13	13	14
85	004	M	PLEURAL EFFUSION AGE >69 AND/OR C. C.	27	67	68	78	78	78
86	004	M	PLEURAL EFFUSION AGE <70 W/O C. C.	218	132	131	143	144	145
87	004	M	PULMONARY EDEMA + RESPIRATORY FAILURE	118	95	98	106	106	107
88	004	M	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1963	1869	1869	1882	1891	1911
89	004	M	SIMPLE PNEUMONIA + PLEURISY AGE >69 AND/OR C. C.	224	684	668	675	673	679
90	004	M	SIMPLE PNEUMONIA + PLEURISY AGE 18-69 W/O C. C.	4370	3861	3877	3880	3889	3890
91	004	M	SIMPLE PNEUMONIA + PLEURISY AGE 0-17	1655	1637	1639	1642	1642	1640
92	004	M	INTERSTITIAL LUNG DISEASE AGE >69 AND/OR C. C.	32	133	139	145	143	146
93	004	M	INTERSTITIAL LUNG DISEASE AGE <70 W/O C. C.	603	383	377	365	368	370
94	004	M	PNEUMOTHORAX AGE >69 AND/OR C. C.	11	26	24	50	53	54
95	004	M	PNEUMOTHORAX AGE <70 W/O C. C.	476	105	107	334	337	337
96	004	M	BRONCHITIS + ASTHMA AGE >69 AND/OR C. C.	145	557	485	490	494	496
97	004	M	BRONCHITIS + ASTHMA AGE 18-69 W/O C. C.	3359	2916	2991	2989	2986	2988
98	004	M	BRONCHITIS + ASTHMA AGE 0-17	2893	2872	2883	2880	2880	2881
99	004	M	RESPIRATORY SIGNS + SYMPTOMS AGE >69 AND/OR C. C.	28	97	100	100	104	104
100	004	M	RESPIRATORY SIGNS + SYMPTOMS AGE <70 W/O C. C.	509	386	393	393	390	393
101	004	M	OTHER RESPIRATORY DIAGNOSES AGE >69 AND/OR C. C.	63	231	242	272	273	275
102	004	M	OTHER RESPIRATORY DIAGNOSES AGE <70	938	632	633	642	648	649

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DRG#	MDC	TYPE	TITLE	Version	Version	Version	Version	Version	Version
				I	II	III	IV	V	VI
103	005	S	HEART TRANSPLANT	0	0	0	0	0	0
104	005	S	CARDIAC VALVE PROCEDURE WITH PUMP + WITH CARDIAC CATH	0	0	0	43	43	43
105	005	S	CARDIAC VALVE PROCEDURE WITH PUMP + W/O CARDIAC CATH	0	229	229	141	140	140
106	005	S	CORONARY BYPASS WITH CARDIAC CATH	0	0	0	202	202	202
107	005	S	CORONARY BYPASS W/O CARDIAC CATH	0	1093	1093	712	712	709
108	005	S	CARDIOTHORACIC PROCEDURES + CORONARY BYPASS, WITH PUMP	0	114	114	92	93	93
109	005	S	CARDIOTHORACIC PROCEDURES W/O PUMP	0	64	64	59	54	54
110	005	S	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE >69 AND/OR C. C.	0	237	240	175	175	175
111	005	S	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE <70 W/O C. C.	0	211	208	185	185	185
112	005	S	VASOLLAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION	0	697	697	691	691	691
113	005	S	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB + TOE	0	45	45	42	42	42
114	005	S	UPPER LIMB + TOE AMPUTATION FOR CIRC SYSTEM DISORDERS	0	20	20	20	20	20
115	005	S	PERMANENT CARDIAC PACEMAKER IMPLANT WITH AMI OR CHF	0	20	20	37	38	37
116	005	S	PERMANENT CARDIAC PACEMAKER IMPLANT W/O AMI OR CHF	0	78	78	149	151	152
117	005	S	CARDIAC PACEMAKER REPLACE + REVIS. EXC PULSEGEN REPL ONLY	0	20	20	25	25	25
118	005	S	CARDIAC PACEMAKER PULSE GENERATOR REPLACEMENT ONLY	0	0	0	19	19	19
119	005	S	VEIN LIGATION + STRIPPING	0	332	332	333	333	333
120	005	S	OTHER O.R. PROCEDURES ON THE CIRCULATORY SYSTEM	0	32	56	58	58	57
121	005	M	CIRCULATORY DISORDERS WITH AMI + C.V. COMP. DISCH. ALIVE	0	405	405	402	393	394
122	005	M	CIRCULATORY DISORDERS WITH AMI W/O C.V. COMP. DISCH. ALIVE	1970	1537	1538	1552	1561	1570
123	005	M	CIRCULATORY DISORDERS WITH AMI, EXPIRED	298	313	316	320	320	321
124	005	M	CIRCULATORY DISORDERS EXC AMI, WITH CARD CATH + COMPLEX DIAG	0	0	0	249	249	252
125	005	M	CIRCULATORY DISORDERS EXC AMI, WITH CARD CATH W/O COMPLEX DI	0	0	0	3221	3221	3266
126	005	M	ACUTE + SUBACUTE ENDOCARDITIS	45	37	37	35	35	35
127	005	M	HEART FAILURE + SHOCK	949	895	892	878	878	888
128	005	M	DEEP VEIN THROMBOPHLEBITIS	83	429	429	431	431	434
129	005	M	CARDIAC ARREST	120	93	94	92	92	95
130	005	M	PERIPHERAL VASCULAR DISORDERS AGE >69 AND/OR C. C.	382	626	681	661	654	658
131	005	M	PERIPHERAL VASCULAR DISORDERS AGE <70 W/O C. C.	2278	1023	965	936	943	947
132	005	M	ATHEROSCLEROSIS AGE >69 AND/OR C. C.	857	4034	3996	3002	3004	3021
133	005	M	ATHEROSCLEROSIS AGE <70 W/O C. C.	6530	1936	1974	1149	1150	1154
134	005	M	HYPERTENSION	1119	1073	1074	1028	1028	1035
135	005	M	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE >69 AND/OR C. C.	103	429	419	295	294	297
136	005	M	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 18-69 W/O C. C.	1015	451	461	301	303	304
137	005	M	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 0-17	554	419	421	210	210	209
138	005	M	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE >69 AND/OR C.	351	756	744	685	688	695
139	005	M	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE <70 W/O C. C.	1410	952	964	897	894	896
140	005	M	ANGINA PECTORIS	906	897	897	835	871	869
141	005	M	SYNCOPE + COLLAPSE AGE >69 AND/OR C. C.	91	254	235	228	225	226
142	005	M	SYNCOPE + COLLAPSE AGE <70 W/O C. C.	682	506	530	522	525	527
143	005	M	CHEST PAIN	3392	3330	3330	2620	2823	2848
144	005	M	OTHER CIRCULATORY DIAGNOSES WITH C. C.	0	392	382	327	319	323
145	005	M	OTHER CIRCULATORY DIAGNOSES W/O C. C.	1096	541	544	475	447	447
146	006	S	RECTAL RESECTION AGE >69 AND/OR C. C.	0	73	74	73	73	73
147	006	S	RECTAL RESECTION AGE <70 W/O C. C.	0	60	58	58	58	58
148	006	S	MAJOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C. C.	0	488	463	453	450	447
149	006	S	MAJOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C. C.	0	497	445	436	440	440
150	006	S	PERITONEAL ADHESIOLYSIS AGE >69 AND/OR C. C.	0	93	68	65	65	66
151	006	S	PERITONEAL ADHESIOLYSIS AGE <70 W/O C. C.	0	187	152	149	150	154
152	006	S	MINOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C. C.	0	195	192	270	262	101
153	006	S	MINOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C. C.	0	458	466	731	743	351

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DRG#	MCC	TYPE	TITLE	Version	Version	Version	Version	Version	Version
				I	II	III	IV	V	VI
154	006	S	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE >69 AND/OR C. C.	0	238	299	293	255	266
155	006	S	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 18-69 W/O C. C.	0	452	474	468	323	326
156	006	S	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 0-17	0	123	126	125	111	111
157	006	S	ANAL PROCEDURES AGE >69 AND/OR C. C.	0	245	240	164	163	164
158	006	S	ANAL PROCEDURES AGE <70 W/O C. C.	0	1896	1948	1686	1687	1726
159	006	S	HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE >69 AND/OR C. C.	0	134	143	143	142	142
160	006	S	HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE 18-69 W/O C. C.	0	837	843	843	844	845
161	006	S	INGUINAL + FEMORAL HERNIA PROCEDURES AGE >69 AND/OR C. C.	0	462	448	448	455	462
162	006	S	INGUINAL + FEMORAL HERNIA PROCEDURES AGE 18-69 W/O C. C.	0	3862	3883	3877	3870	3881
163	006	S	HERNIA PROCEDURES AGE 0-17	0	1438	1437	1437	1437	1437
164	006	S	APPECTECTOMY WITH COMPLICATED PRINC. DIAG AGE>69 AND/OR C. C.	0	71	77	75	75	76
165	006	S	APPECTECTOMY WITH COMPLICATED PRINC. DIAG AGE <70 W/O C. C.	0	402	408	409	409	411
166	006	S	APPECTECTOMY W/O COMPLICATED PRINC. DIAG AGE >69 AND/OR C. C.	0	103	108	108	107	107
167	006	S	APPECTECTOMY W/O COMPLICATED PRINC. DIAG AGE <70 W/O C. C.	0	1867	1890	1865	1866	1866
168	006	S	PROCEDURES ON THE MOUTH AGE >65 AND/OR C. C.	0	141	149	145	147	148
169	006	S	PROCEDURES ON THE MOUTH AGE <70 W/O C. C.	0	1549	1541	1537	1542	1542
170	006	S	OTHER DIGESTIVE SYSTEM PROCEDURES AGE >69 AND/OR C. C.	0	698	707	705	685	91
171	006	S	OTHER DIGESTIVE SYSTEM PROCEDURES AGE <70 W/O C. C.	0	1835	1828	1818	1846	275
172	006	M	DIGESTIVE MALIGNANCY AGE >69 AND/OR C. C.	222	364	370	378	377	400
173	006	M	DIGESTIVE MALIGNANCY AGE <70 W/O C. C.	1013	199	197	197	202	218
174	006	M	HEMORRHAGE AGE >69 AND/OR C. C.	229	373	380	387	368	614
175	006	M	G.I. HEMORRHAGE AGE <70 W/O C. C.	1624	667	661	669	709	1083
176	006	M	COMPLICATED PEPTIC ULCER	259	60	60	62	67	111
177	006	M	UNCOMPLICATED PEPTIC ULCER >69 AND/OR C. C.	69	118	118	119	116	178
178	006	M	UNCOMPLICATED PEPTIC ULCER <70 W/O C. C.	1105	490	491	493	522	861
179	006	M	INFLAMMATORY BOWEL DISEASE	620	447	445	449	450	514
180	006	M	G.I. OBSTRUCTION AGE >69 AND/OR C. C.	85	114	115	118	119	127
181	006	M	G.I. OBSTRUCTION AGE <70 W/O C. C.	562	355	353	356	356	366
182	006	M	ESOPHAGITIS, GASTROENT. + MISC. DIGEST. DIS AGE >69 +/OR C. C.	487	1482	1253	1258	1257	1571
183	006	M	ESOPHAGITIS, GASTROENT. + MISC. DIGEST. DIS AGE 18-69 W/O C. C.	8054	7127	7363	7361	7459	8423
184	006	M	ESOPHAGITIS, GASTROENTERITIS + MISC. DIGEST. DISORDERS AGE 0	1901	3045	3044	3044	3049	3071
185	006	M	DENTAL + ORAL DIS, EXC EXTRACTIONS + RESTORATIONS, AGE >17	4081	783	769	774	776	785
186	006	M	DENTAL + ORAL DIS, EXC EXTRACTIONS + RESTORATIONS, AGE 0-17	743	164	162	160	160	160
187	006	M	DENTAL EXTRACTIONS + RESTORATIONS	0	2042	2053	2049	2049	2050
188	006	M	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >69 AND/OR C. C.	531	382	365	374	366	400
189	006	M	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 18-69 W/O C. C.	10716	1406	1363	1394	1418	1501
190	006	M	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	2737	402	398	399	409	412
191	007	S	MAJOR PANCREAS, LIVER + SHUNT PROCEDURES	0	68	68	56	56	56
192	007	S	MINOR PANCREAS, LIVER + SHUNT PROCEDURES	0	29	29	37	37	38
193	007	S	BILIARY TRACT PROC EXC TCT CHOLECYSTECTOMY AGE >69 +/OR C. C.	0	59	60	57	57	57
194	007	S	BILIARY TRACT PROC EXC TOT CHOLECYSTECTOMY AGE <70 W/O C. C.	0	52	51	50	50	50
195	007	S	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE >69 AND/OR C. C.	0	108	107	99	107	107
196	007	S	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE <70 W/O C. C.	0	84	85	78	85	85
197	007	S	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE >69 AND/OR C. C.	0	503	506	512	502	502
198	007	S	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE <70 W/O C. C.	0	1794	1791	1797	1792	1792
199	007	S	HEPATOBIILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	0	44	44	44	44	29
200	007	S	HEPATOBIILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	0	297	297	294	297	107
201	007	S	OTHER HEPATOBIILIARY OR PANCREAS O.R. PROCEDURES	0	15	13	11	12	12
202	007	M	CIRRHOSIS + ALCOHOLIC HEPATITIS	544	425	427	425	430	503
203	007	M	MALIGNANCY OF HEPATOBIILIARY SYSTEM OR PANCREAS	344	225	225	229	229	243
204	007	M	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	865	704	705	711	711	765

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DRG#	MDC TYPE	TITLE	Version	Version	Version	Version	Version	Version
			I	II	III	IV	V	VI
205	007 M	DISORDERS OF LIVER EXC MALIG, CIRRH, ALC HEPA AGE >69 AND/OR	49	311	306	312	320	333
206	007 M	DISORDERS OF LIVER EXC MALIG, CIRRH, ALC HEPA AGE <70 W/O C. C.	1469	1052	1056	1057	1068	1073
207	007 M	DISORDERS OF THE BILIARY TRACT AGE >69 AND/OR C. C.	162	187	176	178	166	185
208	007 M	DISORDERS OF THE BILIARY TRACT AGE <70 W/O C. C.	3184	573	586	587	582	611
209	008 S	MAJOR JOINT PROCEDURES	0	291	291	286	336	336
210	008 S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >69 AND/OR C. C.	0	0	0	0	0	0
211	008 S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 18-69 W/O C. C.	0	0	0	0	0	0
212	008 S	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	0	0	0	0	0	0
213	008 S	AMPUTATIONS FOR MUSCULOSKELETAL SYSTEM + CONN. TISSUE DISORD	0	58	85	67	74	74
214	008 S	BACK + NECK PROCEDURES AGE >69 AND/OR C. C.	0	141	144	131	134	134
215	008 S	BACK + NECK PROCEDURES AGE <70 W/O C. C.	0	806	803	781	790	790
216	008 S	BIOPSIES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	0	57	64	91	127	95
217	008 S	WND DEBRID + SKN GRAFT EXC HAND, FOR MUSCULOSKELETAL + CONN.	0	458	613	582	615	613
218	008 S	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE >69 +/OR	0	0	0	15	15	15
219	008 S	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE 18-69 W/O	0	0	0	164	179	179
220	008 S	LOWER EXTREM + HUMER PROC EXC HIP, FOOT, FEMUR AGE 0-17	0	0	0	10	10	10
221	008 S	KNEE PROCEDURES AGE >69 AND/OR C. C.	0	41	41	84	88	86
222	008 S	KNEE PROCEDURES AGE <70 W/O C. C.	0	579	576	2421	2453	2453
223	008 S	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE >69 AND/OR C. C.	0	15	14	14	14	14
224	008 S	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE <70 W/O C. C.	0	628	624	621	621	621
225	008 S	FOOT PROCEDURES	0	1714	1656	1471	1508	1509
226	008 S	SOFT TISSUE PROCEDURES AGE >69 AND/OR C. C.	0	102	77	74	85	80
227	008 S	SOFT TISSUE PROCEDURES AGE <70 W/O C. C.	0	1370	1237	1162	1358	1357
228	008 S	GANGLION (HAND) PROCEDURES	0	511	507	508	0	642
229	008 S	HAND PROCEDURES EXCEPT GANGLION	0	1204	1114	1143	1899	1258
230	006 S	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES OF HIP + FEMUR	0	0	0	0	0	0
231	008 S	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES EXCEPT HIP + FEM	0	1837	1966	2152	2192	2112
232	008 S	ARTHROSCOPY	0	2929	2929	1724	1821	1828
233	008 S	OTHER MUSCULOSKELETAL SYS + CONN TISS O.R. PROC AGE >69 +/OR C	0	455	461	437	467	473
234	008 S	OTHER MUSCULOSKELETAL SYS + CONN TISS O.R. PROC AGE <70 W/O C. C.	0	4618	4629	4431	4919	4945
235	008 M	FRACTURES OF FEMUR	399	231	232	219	221	222
236	008 M	FRACTURES OF HIP + PELVIS	579	265	269	275	276	282
237	008 M	SPRAINS, STRAINS, + DISLOCATIONS OF HIP, PELVIS + THIGH	93	83	84	83	83	83
238	008 M	OSTEOMYELITIS	500	324	324	323	325	332
239	008 M	PATHOLOGICAL FRACTURES + MUSCULOSKELETAL + CONN. TISS. MALIG	494	355	343	350	675	676
240	008 M	CONNECTIVE TISSUE DISORDERS AGE >69 AND/OR C. C.	30	185	185	188	243	258
241	008 M	CONNECTIVE TISSUE DISORDERS AGE <70 W/O C. C.	723	420	418	420	592	606
242	008 M	SEPTIC ARTHRITIS	164	96	97	97	99	100
243	008 M	MEDICAL BACK PROBLEMS	6475	5569	5576	5603	5611	5626
244	008 M	BONE DISEASES + SEPTIC ARTHROPATHY AGE >69 AND/OR C. C.	170	131	129	125	172	178
245	008 M	BONE DISEASES + SEPTIC ARTHROPATHY AGE <70 W/O C. C.	1640	496	497	490	572	580
246	008 M	NON-SPECIFIC ARTHROPATHIES	194	111	111	111	113	114
247	008 M	SIGNS + SYMPTOMS OF MUSCULOSKELETAL SYSTEM + CONN TISSUE	729	408	405	588	1003	1009
248	008 M	TENDONITIS, MYOSITIS + BURSITIS	2473	839	813	629	861	906
249	008 M	AFTERCARE, MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	1894	793	795	645	754	787
250	006 M	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE >69 +/OR	39	72	73	74	75	77
251	008 M	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE 18-69 W/O	2296	851	872	879	880	884
252	008 M	FX, SPRNS, STRNS + DISL OF FOREARM, HAND, FOOT AGE 0-17	702	486	490	491	491	491
253	008 M	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE >69 +/O	85	203	214	216	217	218
254	008 M	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE 18-69 W	8093	3159	3160	2761	2766	2775
255	008 M	FX, SPRNS, STRNS + DISL OF UPARM, LOWLEG EX FOOT AGE 0-17	1045	592	595	576	578	578

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ICD-9	MOD	TYPE	TITLE	Version	Version	Version	Version	Version	Version
				I	II	III	IV	V	VI
155	009	M	OTHER DIAGNOSES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSU	5454	1185	1116	1149	1512	1484
157	009	S	TOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C. C.	0	84	159	155	155	155
158	009	S	TOTAL MASTECTOMY FOR MALIGNANCY AGE <70 W/O C. C.	0	254	304	305	305	305
159	009	S	SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C. C.	0	52	27	27	27	27
160	009	S	SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE <70	0	172	72	76	76	76
161	009	S	BREAST PROC FOR NON-MALIG EXCEPT BIOPSY + LOC EXC	0	652	652	891	891	891
162	009	S	BREAST BIOPSY + LOCAL EXCISION FOR NON-MALIGNANCY	0	1178	1178	1439	1439	1439
163	009	S	SKIN GRAFTS FOR SKIN ULCER OR CELLULITIS AGE >69 AND/OR C. C.	0	38	37	36	38	38
164	009	S	SKIN GRAFTS FOR SKIN ULCER OR CELLULITIS AGE <70 W/O C. C.	0	75	76	75	73	73
165	009	S	SKIN GRAFTS EXCEPT FOR SKIN ULCER OR CELLULITIS WITH C. C.	0	76	81	82	83	81
166	009	S	SKIN GRAFTS EXCEPT FOR SKIN ULCER OR CELLULITIS W/O C. C.	0	713	708	700	701	702
167	009	S	PERIANAL + PILONICAL PROCEDURES	0	509	604	602	602	602
168	009	S	SKIN, SUBCUTANEOUS TISSUE + BREAST PLASTIC PROCEDURES	0	729	728	765	781	781
169	009	S	OTHER SKIN, SUBCUT TISS + BREAST O.R. PROC AGE >69 +/OR C. C.	0	190	259	252	252	243
170	009	S	OTH SKIN, SUBCUT TISS + BREAST O.R. PROC AGE <70 W/O C. C.	0	1403	2476	2545	2550	2564
171	009	M	SKIN ULCERS	211	131	124	122	123	124
172	009	M	MAJOR SKIN DISORDERS AGE >69 AND/OR C. C.	34	100	96	99	98	100
173	009	M	MAJOR SKIN DISORDERS AGE <70 W/O C. C.	484	290	272	272	273	276
174	009	M	MALIGNANT BREAST DISORDERS AGE >69 AND/OR C. C.	107	213	215	226	224	227
175	009	M	MALIGNANT BREAST DISORDERS AGE <70 W/O C. C.	861	121	118	117	115	116
176	009	M	NON-MALIGNANT BREAST DISORDERS	1789	774	761	357	357	358
177	009	M	CELLULITIS AGE >69 AND/OR C. C.	102	285	286	288	294	296
178	009	M	CELLULITIS AGE 18-69 W/O C. C.	3887	2219	2178	2173	2167	2170
179	009	M	CELLULITIS AGE 0-17	682	505	497	496	496	496
180	009	M	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE >69 +/OR C. C.	45	445	519	539	543	543
181	009	M	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 18-69 W/O C. C.	3257	1827	2043	2066	2070	2072
182	009	M	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 0-17	485	330	369	370	370	370
183	009	M	MINOR SKIN DISORDERS AGE >69 AND/OR C. C.	128	257	212	211	211	215
184	009	M	MINOR SKIN DISORDERS AGE <70 W/O C. C.	5350	2809	1796	1618	1624	1631
185	010	S	AMPUTATIONS FOR ENDOCRINE, NUTRITIONAL + METABOLIC DISORDERS	0	63	63	61	92	92
186	010	S	ADRENAL + PITUITARY PROCEDURES	0	51	51	51	52	51
187	010	S	SKIN GRAFTS + WOUND DEBRIDE FOR ENDOC, NUTRIT + METAB DISORD	0	22	22	23	29	28
188	010	S	C.R. PROCEDURES FOR OBESITY	0	85	85	84	84	84
189	010	S	PARATHYROID PROCEDURES	0	29	29	30	29	29
190	010	S	THYROID PROCEDURES	0	492	492	492	492	492
191	010	S	THYROIDECTOMY PROCEDURES	0	75	75	75	75	75
192	010	S	OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE >69 + OR C. C.	0	41	41	48	47	48
193	010	S	OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE <70 W/O C. C.	0	56	56	83	59	60
194	010	M	DIABETES AGE >=36	868	1355	1355	1339	1356	1376
195	010	M	DIABETES AGE 0-35	461	775	776	774	781	789
196	010	M	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE >69 AND/OR C. C.	200	456	434	435	438	454
197	010	M	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 18-69 W/O C. C.	1018	608	628	628	626	636
198	010	M	NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 0-17	682	675	676	675	675	676
199	010	M	INBORN ERRORS OF METABOLISM	153	119	116	120	120	121
200	010	M	ENDOCRINE DISORDERS AGE >69 AND/OR C. C.	44	183	195	187	183	186
201	010	M	ENDOCRINE DISORDERS AGE <70 W/O C. C.	1421	562	558	557	559	563
202	011	S	KIDNEY TRANSPLANT	0	32	32	31	31	31
203	011	S	KIDNEY, URETER + MAJOR BLADDER PROCEDURE FOR NEOPLASM	0	129	129	126	126	126
204	011	S	KIDNEY, URETER + MAJ BLDRPROC FOR NON-MALIG AGE >69 +/OR C.	0	135	134	136	136	136
205	011	S	KIDNEY, URETER + MAJ BLDR PROC FOR NON-MALIG <70 W/O C. C.	0	546	547	545	548	548
206	011	S	PROSTATECTOMY AGE >69 AND/OR C. C.	0	35	35	35	35	35

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DRG#	MDC TYPE	TITLE	Version	Version	Version	Version	Version	Version
			I	II	III	IV	V	VI
307	011 S	PROSTATECTOMY AGE <70 W/O C. C.	0	46	46	46	47	47
308	011 S	MINOR BLADDER PROCEDURES AGE >69 AND/OR C. C.	0	44	45	45	46	45
309	011 S	MINOR BLADDER PROCEDURES AGE <70 W/O C. C.	0	118	117	117	118	119
310	011 S	TRANSURETHRAL PROCEDURES AGE >69 AND/OR C. C.	0	101	101	124	124	124
311	011 S	TRANSURETHRAL PROCEDURES AGE <70 W/O C. C.	0	303	303	350	350	350
312	011 S	URETHRAL PROCEDURES, AGE >69 AND/OR C. C.	0	52	51	50	49	49
313	011 S	URETHRAL PROCEDURES, AGE 18-69 W/O C. C.	0	221	222	220	222	222
314	011 S	URETHRAL PROCEDURES, AGE 0-17	0	76	76	76	76	76
315	011 S	OTHER KIDNEY + URINARY TRACT O.R. PROCEDURES	0	81	81	98	88	62
316	011 M	RENAL FAILURE	239	181	182	174	174	177
317	011 M	ADMIT FOR RENAL DIALYSIS	2	2	2	2	2	2
318	011 M	KIDNEY + URINARY TRACT NEOPLASMS AGE >69 AND/OR C. C.	142	135	136	127	125	127
319	011 M	KIDNEY + URINARY TRACT NEOPLASMS AGE <70 W/O C. C.	660	126	125	107	110	110
320	011 M	KIDNEY + URINARY TRACT INFECTIONS AGE >69 AND/OR C. C.	153	430	411	406	385	388
321	011 M	KIDNEY + URINARY TRACT INFECTIONS AGE 18-69 W/O C. C.	1504	1133	1152	1135	1158	1160
322	011 M	KIDNEY + URINARY TRACT INFECTIONS AGE 0-17	436	418	418	416	416	416
323	011 M	URINARY STONES AGE >69 AND/OR C. C.	32	134	116	115	115	116
324	011 M	URINARY STONES AGE <70 W/O C. C.	1780	1119	1137	1137	1137	1139
325	011 M	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE >69 AND/OR C. C.	52	115	111	106	103	104
326	011 M	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 18-69 W/O C. C.	474	348	352	348	351	354
327	011 M	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 0-17	114	106	106	106	106	106
328	011 M	URETHRAL STRICTURE AGE >69 AND/OR C. C.	39	29	29	29	28	29
329	011 M	URETHRAL STRICTURE AGE 18-65 W/O C. C.	309	57	56	56	55	57
330	011 M	URETHRAL STRICTURE AGE 0-17	84	34	34	34	34	34
331	011 M	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE >69 AND/OR C. C.	103	300	294	290	287	292
332	011 M	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 18-69 W/O C. C.	1231	674	676	649	665	664
333	011 M	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 0-17	319	203	203	203	211	211
334	012 S	MAJOR MALE PELVIC PROCEDURES WITH C. C.	0	23	23	23	23	23
335	012 S	MAJOR MALE PELVIC PROCEDURES W/O C. C.	0	106	106	106	106	106
336	012 S	TRANSURETHRAL PROSTATECTOMY AGE >69 AND/OR C. C.	0	386	387	386	386	386
337	012 S	TRANSURETHRAL PROSTATECTOMY AGE <70 W/O C. C.	0	657	656	656	656	656
338	012 S	TESTES PROCEDURES, FOR MALIGNANCY	0	71	71	121	121	121
339	012 S	TESTES PROCEDURES, NON-MALIGNANT AGE >17	0	1065	1292	1399	1399	1399
340	012 S	TESTES PROCEDURES, NON-MALIGNANT AGE 0-17	0	616	618	656	656	656
341	012 S	PENIS PROCEDURES	0	353	354	355	356	356
342	012 S	CIRCUMCISION AGE >17	0	606	613	610	610	610
343	012 S	CIRCUMCISION AGE 0-17	0	446	446	445	445	445
344	012 S	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY	0	109	110	101	100	96
345	012 S	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIGNANCY	0	101	101	101	101	101
346	012 M	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE >69 AND/OR C. C.	275	261	264	256	255	259
347	012 M	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE <70 W/O C. C.	636	268	266	236	237	237
348	012 M	BENIGN PROSTATIC HYPERTROPHY AGE >69 AND/OR C. C.	273	86	87	87	87	87
349	012 M	BENIGN PROSTATIC HYPERTROPHY AGE <70 W/O C. C.	1009	160	159	158	158	158
350	012 M	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	2272	998	1014	983	982	982
351	012 M	STERILIZATION, MALE	764	0	751	751	751	751
352	012 M	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	2355	446	506	426	426	427
353	013 S	PELVIC EVISCERATION, RADICAL HYSTERECTOMY + VULVECTOMY	0	72	72	71	71	71
354	013 S	NON-RADICAL HYSTERECTOMY AGE >69 AND/OR C. C.	0	984	987	988	897	897
355	013 S	NON-RADICAL HYSTERECTOMY AGE <70 W/O C. C.	0	3037	3034	3027	3118	3119
356	013 S	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	0	621	621	620	621	621
357	013 S	UTERUS + ADENEXA PROCEDURES, FOR MALIGNANCY	0	56	56	64	64	45

DISTRIBUTION OF AMEDD FY83 DATA BY DRG THROUGH MAP CHANGES

DRG#	MOD	TYPE	TITLE	Version	Version	Version	Version	Version	Version
				I	II	III	IV	V	VI
358	013	S	UTERUS + ADENEXA PROC FOR NON-MALIGNANCY EXCEPT TUBAL INTERR	0	1671	1671	1990	1993	1572
359	013	S	TUBAL INTERRUPTION FOR NON-MALIGNANCY	0	1438	1438	1125	1125	1437
360	013	S	VAGINA, CERVIC + VULVA PROCEDURES	0	622	681	775	826	830
361	013	S	LAPAROSCOPY + ENDOSCOPY (FEMALE) EXCEPT TUBAL INTERRUPTION	0	1910	1907	1896	1898	1917
362	013	S	LAPAROSCOPIC TUBAL INTERRUPTION	0	1651	1648	1609	1609	1609
363	013	S	D + C, CONIZATION + RADIO-IMPLNT, FOR MALIGNANCY	0	193	231	215	224	237
364	013	S	D+C, CONIZATION EXCEPT FOR MALIGNANCY	0	2337	2398	2377	2381	2385
365	013	S	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	0	314	313	302	299	309
366	013	M	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE >69 AND/OR C. C.	56	135	137	141	132	136
367	013	M	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE <70 W/O C. C.	1023	227	225	227	227	236
368	013	M	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	2322	1410	1409	1394	1395	1402
369	013	M	MENSTRUAL + OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	15424	1881	1889	1895	1904	1971
370	014	S	CESAREAN SECTION WITH C. C.	0	1951	1961	1941	1750	1750
371	014	S	CESAREAN SECTION W/O C. C.	0	5474	5464	5416	5607	5607
372	014	M	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES	2305	3470	3469	3066	3069	3056
373	014	M	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	28477	31823	31811	30733	30746	30679
374	014	S	VAGINAL DELIVERY WITH STERILIZATION AND/OR D+C	0	1943	1943	1842	1842	2341
375	014	S	VAGINAL DELIVERY WITH O.R. PROC EXCEPT STERIL AND/OR D+C	0	38	40	1655	1656	1678
376	014	M	POSTPARTUM DIAGNOSES W/O O.R. PROCEDURE	896	413	635	632	661	663
377	014	S	POSTPARTUM DIAGNOSES WITH O.R. PROCEDURE	0	249	261	264	330	328
378	014	M	ECTOPIC PREGNANCY	725	725	725	725	725	725
379	014	M	THREATENED ABORTION	2657	2657	2657	2657	373	373
380	014	M	ABORTION W/O D+C	4674	526	488	496	463	450
381	014	M	ABORTION WITH D+C	0	4148	4186	4178	4116	4129
382	014	M	FALSE LABOR	0	0	0	0	2284	2284
383	014	M	OTHER ANTEPARTUM DIAGNOSES WITH MEDICAL COMPLICATIONS	3253	3349	3349	3349	3423	3423
384	014	M	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	1883	1787	1787	1787	2397	2397
385	015		NEONATES, DIED OR TRANSFERRED	547	547	547	547	547	547
386	015		EXTREME IMMATUREITY, NEONATE	27	489	489	489	489	489
387	015		PREMATURITY WITH MAJOR PROBLEMS	0	696	696	696	696	696
388	015		PREMATURITY W/O MAJOR PROBLEMS	228	1896	1896	1896	1896	1896
389	015		FULL TERM NEONATE WITH MAJOR PROBLEMS	169	2846	2846	2846	2848	2848
390	015		NEONATES WITH OTHER SIGNIFICANT PROBLEMS	45776	2030	6392	6392	6391	6391
391	015		NORMAL NEWBORNS	0	38243	33881	33881	33880	33880
392	016	S	SPLENECTOMY AGE >17	0	97	97	88	88	88
393	016	S	SPLENECTOMY AGE 0-17	0	18	18	18	18	18
394	016	S	OTHER O.R. PROCEDURES OF THE BLOOD + BLOOD FORMING ORGANS	0	377	383	383	371	311
395	016	M	RED BLOOD CELL DISORDERS AGE >17	948	851	851	850	850	912
396	016	M	RED BLOOD CELL DISORDERS AGE 0-17	215	207	207	207	207	206
397	016	M	COAGULATION DISORDERS	356	312	312	311	312	317
398	016	M	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE >59 AND/OR C. C.	37	161	162	166	161	165
399	016	M	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE <70 W/O C. C.	999	403	399	406	417	426
400	017	S	LYMPHOMA OR LEUKEMIA WITH MAJOR O.R. PROCEDURE	0	133	132	117	115	115
401	017	S	LYMPHOMA OR LEUKEMIA WITH MINOR O.R. PROC AGE >69 AND/OR C.	0	48	47	50	51	39
402	017	S	LYMPHOMA OR LEUKEMIA WITH MINOR O.R. PROCEDURE AGE <70 W/O C	0	115	117	115	114	110
403	017	M	LYMPHOMA OR LEUKEMIA AGE >69 AND/OR C. C.	178	601	604	611	606	618
404	017	M	LYMPHOMA OR LEUKEMIA AGE 18-69 W/O C. C.	1243	552	549	553	559	563
405	017	M	LYMPHOMA OR LEUKEMIA AGE 0-17	186	158	158	161	162	162
406	017	S	MYELOPROLIF DISORD OR POORLY DIFF NEOPLASM W MAJ O.R. PROC +	0	44	45	38	37	37
407	017	S	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O	0	45	44	42	35	35
408	017	S	MYELOPROLIF DISORD OR POORLY DIFF NEOPL WITH MINOR O.R. PROC	0	68	68	51	74	55

DISTRIBUTION OF AMEDD FY83 DATA BY DRG THROUGH MAP CHANGES

DRG#	MDC TYPE	TITLE	Version	Version	Version	Version	Version	Version
			I	II	III	IV	V	VI
409	017 M	RADIOTHERAPY	342	314	314	336	316	317
410	017 M	CHEMOTHERAPY	1563	1559	1559	1559	1556	1556
411	017 M	HISTORY OF MALIGNANCY W/O ENDOSCOPY	76	44	44	61	41	41
412	017 M	HISTORY OF MALIGNANCY WITH ENDOSCOPY	0	21	21	5	25	27
413	017 M	OTHER MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE/69 +/OR	68	284	283	287	288	300
414	017 M	OTHR MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE<70 W/O C	539	274	275	274	279	263
415	018 S	O.R. PROCEDURE FOR INFECTIONS + PARASITIC DISEASES	0	361	362	362	372	356
416	018 M	SEPTCEMIA AGE >17	169	136	138	138	136	141
417	018 M	SEPTCEMIA AGE 0-17	234	225	225	226	226	226
418	018 M	POSTOPERATIVE + POST-TRAUMATIC INFECTIONS	646	389	385	386	387	388
419	018 M	FEVER OF UNKNOWN ORIGIN AGE >65 AND/OR C. C.	15	67	61	61	62	62
420	018 M	FEVER OF UNKNOWN ORIGIN AGE 18-69 W/O C. C.	189	129	135	134	133	136
421	018 M	VIRAL ILLNESS AGE >17	3088	3121	3123	3124	3508	3513
422	018 M	VIRAL ILLNESS + FEVER OF UNKNOWN ORIGIN AGE 0-17	1395	1442	1442	1440	1485	1485
423	018 M	OTHER INFECTIOUS + PARASITIC DISEASES DIAGNOSES	402	410	409	409	440	444
424	019 S	O.R. PROCEDURES WITH PRINCIPAL DIAGNOSIS OF MENTAL ILLNESS	0	120	117	115	111	87
425	019 M	ACUTE ADJUST REACT + DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTIO	723	712	713	713	713	720
426	019 M	DEPRESSIVE NEUROSES	1934	1913	1914	1916	1916	1920
427	019 M	NEUROSES EXCEPT DEPRESSIVE	1120	1567	1571	1571	1401	1405
428	019 M	DISORDERS OF PERSONALITY + IMPULSE CONTROL	646	1017	1017	1016	1016	1016
429	019 M	ORGANIC DISTURBANCES + MENTAL RETARDATION	321	320	320	320	321	322
430	019 M	PSYCHOSES	2877	2837	2833	2834	2834	2841
431	019 M	CHILDHOOD MENTAL DISORDERS	114	129	129	129	130	129
432	019 M	OTHER DIAGNOSES OF MENTAL DISORDERS	122	256	257	257	256	256
433	020	SUBSTANCE USE + SUBST INDUCED ORGANIC MENTAL DISORDERS, LEFT	64	69	69	69	69	69
434	020	DRUG DEPENDENCE	114	219	219	219	219	219
435	020	DRUG USE EXCEPT DEPENDENCE	980	176	176	176	1082	176
436	020	ALCOMOL DEPENDENCE	0	159	159	159	1890	1890
437	020	ALCOHOL USE EXCEPT DEPENDENCE	27	967	967	967	61	967
438	020	ALCOHOL + SUBSTANCE INDUCED ORGANIC MENTAL SYNDROME	3718	3834	3834	3834	2103	2103
439	021 S	SKIN GRAFTS FOR INJURIES	0	95	95	89	89	89
440	021 S	WOUND DEBRIGEMENTS FOR INJURIES	0	294	294	291	292	292
441	021 S	HAND PROCEDURES FOR INJURIES	0	100	100	104	105	105
442	021 S	OTHER O.R. PROCEDURES FOR INJURIES AGE >69 AND/OR C. C.	0	262	277	255	254	235
443	021 S	OTHER O.R. PROCEDURES FOR INJURIES AGE <70 W/O C. C.	0	725	737	732	720	709
444	021 M	MULTIPLE TRAUMA AGE >69 AND/OR C. C.	30	190	190	207	209	211
445	021 M	MULTIPLE TRAUMA AGE 18-65 W/O C. C.	1889	894	932	959	961	961
446	021 M	MULTIPLE TRAUMA AGE 0-17	304	182	192	192	192	191
447	021 M	ALLERGIC REACTIONS AGE >17	128	127	127	127	127	127
448	021 M	ALLERGIC REACTIONS AGE 0-17	35	35	35	35	35	35
449	021 M	TOXIC EFFECTS OF DRUGS AGE >69 AND/OR C. C.	49	454	440	447	441	447
450	021 M	TOXIC EFFECTS OF DRUGS AGE 18-69 W/O C. C.	2311	1849	1862	1854	1864	1869
451	021 M	TOXIC EFFECTS OF DRUGS AGE 0-17	995	977	978	977	983	987
452	021 M	COMPLICATIONS OF TREATMENT AGE >69 AND/OR C. C.	74	146	148	149	150	156
453	021 M	COMPLICATIONS OF TREATMENT AGE <70 W/O C. C.	1152	547	548	527	529	529
454	021 M	OTHER INJURIES, POISONINGS + TOXIC EFFDIAG AGE >69 AND/OR C.	4	113	108	113	133	133
455	021 M	OTHER INJURIES, POISONINGS + TOXIC EFF DIAG AGE <70 W/O C. C.	1335	1154	1161	1163	1201	1201
456	022	BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	81	77	81	81	81	81
457	022	EXTENSIVE BURNS	1	10	38	38	139	83
458	022 S	NON-EXTENSIVE BURNS WITH SKIN GRAFTS	0	169	160	152	102	126
459	022 S	NON-EXTENSIVE BURNS WITH WOUND DEBRIDEMENT + OTHER O.R. PROC	0	84	86	92	84	80

DISTRIBUTION OF AMEDD FY83 DATA BY DRG THROUGH MAP CHANGES

DRG	MDC	TYPE	TITLE	Version	Version	Version	Version	Version	Version
				I	II	III	IV	V	VI
460	022	M	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1005	699	704	707	669	702
461	023	S	O R PROC WITH DIAGNOSES OF OTHER CONTACT WITH HEALTH SERVIC	0	469	466	469	451	462
462	023	M	REHABILITATION	26	20	20	20	20	20
463	023	M	SIGNS + SYMPTOMS WITH C. C.	0	83	82	82	81	83
464	023	M	SIGNS + SYMPTOMS W/O C. C.	322	226	228	229	230	231
465	023	M	AFTERCARE WITH HISTORY OF MALIGNANCY AS SECONDARY DX	0	494	493	489	493	501
466	023	M	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DX	1979	1282	1285	1284	1286	1298
467	023	M	OTHER FACTORS INFLUENCING HEALTH STATUS	4925	4805	4805	4806	4818	4784
468	023	M	UNRELATED OR PROCEDURE	0	6461	5535	5442	5528	4597
469	0	C	PRIM DX INVALID AS DISCHARGE DIAGNOSIS	684	918	684	684	0	0
470	0	C	UNGROUPABLE	29328	5072	3980	3980	0	3

NO-A188 996

CONVERSION OF ICD-9 (INTERNATIONAL CLASSIFICATION OF
DISEASES NINTH REVIS (U) ARMY HEALTH CARE STUDIES AND
CLINICAL INVESTIGATION ACTIVITY F. S W BAKER ET AL

2/2

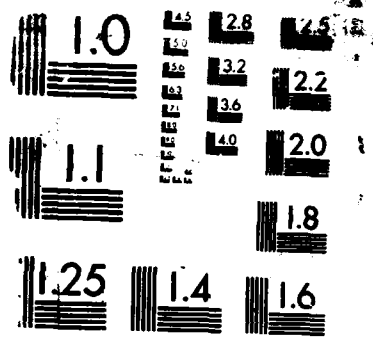
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31 AUG 87 HC51A-MR-87-0078

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H. CANADIAN MAJOR CLINICAL CATEGORIES

MCC	Title
1	Diseases and Disorders of the Nervous System
2	Diseases and Disorders of the Eye
3	Diseases and Disorders of the Ear, Nose, and Throat
4	Diseases and Disorders of the Respiratory System
5	Diseases and Disorders of the Circulatory System
6	Diseases and Disorders of the Digestive System
7	Diseases and Disorders of the Hepatobiliary System and Pancreas
8	Diseases and Disorders of the Musculoskeletal System and Connective Tissue
9	Diseases and Disorders of Skin, Subcutaneous Tissue and Breast
10	Endocrine, Nutritional, and Metabolic Diseases and Disorders
11	Diseases and Disorders of the Kidney and Urinary Tract
12	Diseases and Disorders of the Male Reproductive System
13	Diseases and Disorders of the Female Reproductive System
14	Pregnancy, Childbirth, and the Puerperium
15	Newborns and Other Neonates with Conditions Originating in the Perinatal Period
16	Diseases and Disorders of the Blood and Blood-Forming Organs and Immunological Disorders
17	Myeloproliferative Diseases and Disorders and Poorly Differentiated Neoplasms
18	Infectious and Parasitic Diseases (Systemic or Unspecified Sites)
19	Mental Diseases and Disorders
20	Substance Use and Substance Induced Organic Mental Disorders
21	Injuries, Poisonings and Toxic Effects of Drugs
22	Burns
23	Factors Influencing Health Status and Contacts with Health Services

I. CANADIAN CASE MIX GROUPS

CCMG	Title
1	CRANIOTOMY, AGE >18 EXC TRAUMA
2	CRANIOTOMY FOR TRAUMA, AGE >18
3	CRANIOTOMY, AGE <18
4	SPINAL PROCEDURES
5	EXTRACRANIAL VASCULAR PROC.
6	CARPAL TUNNEL RELEASE
7	PER/CRAN/OTH NRV OP, AGE>70/CC
8	PER/CRAN/OTH NRV OP, AGE<70, NO CC
9	SPINAL DISORDERS & INJURIES
10	NERVOUS SYSTEM NEO, AGE>70/CC
11	NERVOUS SYS NEO, AGE<&), NO CC
12	DEGENERATIVE NERV. DISORDERS
13	M.S. & CEREBELLAR ATAXIA
14	SPEC. CEREBROVASC DIS, NOT TIA
15	TRANSIENT ISHEMIC ATTACKS
16	NONSPEC. CEREBROVASC DIS, CC
17	NONSPEC. CEREBROVASC DIS, NO CC
18	CRAN/PERIPH NRV DIS, AGE<70/CC
19	CRAN/PERIPH NRV DIS, <70, NO CC
20	NER. SYS. INFECT, NOT V.MENINGI
21	VIRAL MENINGITIS
22	HYPERTENSIVE ENCEPHALOPATHY
23	NONTRAUMATIC STUPOR/COMA
24	SEIZURE, HEADACHE, AGE>70/CC
25	SEIZURE, HEADACHE, 18-69, NOCC
26	SEIZURE, HEADACHE, AGE 0-17
27	
28	CNS INJ EX CONCUS., AGE<70/CC
29	CNS INJ EX CONCUS., 18-69, NOCC
30	CNS INJ EX CONCUS., AGE 0-17
31	CONCUSSION, AGE>70/CC
32	CONCUSSION, AGE 18-69, NO CC
33	CONCUSSION, AGE 0-17, NO CC
34	OTHER NERV SYS DX, AGE>70/CC
35	OTHER NERV SYS DX, AGE<70,NOCC
36	
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43	
44	
45	
46	RETINA PROCEDURES
47	ORBIT PROCEDURES
48	PRIMARY IRIS PROCEDURES

CCMG

Title

49 LENS PROCEDURES
50 OTH EXTRAOCULAR PROC, AGE 18+
51 OTH EXTRAOCULAR PROC, AGE 18+
52 OTHER INTRAOCULAR PROCEDURES
53 HYPHEMA
54 ACUTE MAJOR EYE INFECTION
55 NEUROLOGICAL EYE DISORDERS
56 OTH EYE DX, AGE 18+, WITH CC
57 OTH EYE DX, AGE 18+, NO CC
58 OTH EYE DX, AGE 0-17
59
60
61
62
63
64 MAJOR HEAD & NECK PROCEDURES
65 SIALADENECTOMY
66 SALIV GL PROC EXC SIALADENECT
67 CLEFT LIP & PALATE REPAIR
68 SINUS & MASTOID PROC, AGE 18+
69 SINUS & MASTOID PROC, AGE 0-17
70 MIS NOSE, THROAT, EAR PROCED
71 RHINOPLASTY
72 TONS/ADEN PROC EX T&A, AGE 18+
73 TONS/ADEN PROC EX T&A, AGE 0-17
74 T & A, AGE 18+
75 T & A, AGE 0-17
76 MYRINGOTOMY, AGE 18+
77 MYRINGOTOMY, AGE 0-17
78 OTHER ENT PROCEDURES
79 ENT MALIGNANCY
80 DYSEQUILIBRIUM
81 EPISTAXIS
82 EPIGLOTTITIS
83 OTITIS MEDIA & URI, AGE>70/CC
84 OTIT MEDIA & URI, 18-69, NO CC
85 OTIT MEDIA & URI, 0-17, NO CC
86 LARYNGOTRACHEITIS
87 NASAL TRAUMA & DEFORMITY
88 OTHER ENT DX, AGE 18+
89 OTHER ENT DX, AGE 0-17
90
91
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CCMG

Title

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97
98
99 MAJOR CHEST PROCEDURES
100 RESP PROC EXC MAJOR CHEST, CC
101 RESP PROC EXC MAJOR CHEST, NO CC
102 PULMONARY EMBOLISM
103 RESP INFEC/INFLAM, AGE>70/CC
104 RESP INFEC/INFLAM, 18-69, NO CC
105 RESP INFEC/INFLAM, 0-17, NO CC
106 RESPIRATORY NEOPLASM
107 MAJOR CHEST TRAUMA
108 MAJ CHEST TRAUMA, AGE>70/CC
109 MAJ CHEST TRAUMA, AGE<70, NO CC
110 PLEURAL EFFUSION, AGE>70, CC
111 PLEURAL EFFUSION, AGE<70, NO CC
112 PULM EDEMA, RESP FAILURE
113 CHR OBSTR PULM DISEASE
114 PNEUMONIA/PLEURISY, AGE>70/CC
115 PNEUMONIA/PLEURISY, 18-69/NO CC
116 PNEUMONIA/PLEURISY, AGE 0-17
117 INTERSTIT LUNG DIS, AGE>70/CC
118 INTERSTIT LUNG DIS, AGE<70, NOCC
119 PNEUMOTHORAX, AGE>70/CC
120 PNEUMOTHORAX, AGE<70, NO CC
121 BRONCHITIS,/ASTHMA, AGE>70/CC
122 BRONCHITIS,/ASTHMA, 18-69, NO CC
123 BRONCHITIS,/ASTHMA, AGE 0-17
124 RESP SIGNS/SYMPT, AGE>70/CC
125 RESP SIGNS/SYMPT, AGE<70, NO CC
126 OTHER RESP DX, AGE>70/CC
127 OTHER RESP DX, AGE<70, NO CC
128
129
130
131
132
133
134
135
136
137
138 HEART TRANSPLANT
139 CARD VALV PROC W PUMP, CATH
140 CARD VALV PROC W PUMP, NO CATH
141 CORONARY BYPASS W CARD CATH
142 CORONARY BYPASS NO CARD CATH
143 OTH CAR-THORAC PROC W PUMP
144 OTH CAR-THORAC PROC, NO PUMP
145 MAJ VASC RECONSTR, AGE>70/CC

CCMG

Title

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146 MAJ VASC RECONSTR, AGE<70, NOCC
147 VASC PROC EX MAJOR RECONTR
148 AMP EXC UPP LIMB, TOE FOR CVS
149 UPP LIMB, TOE AMP FOR CVS DIS
150 PERM PACEMAKER IMPL W AMI/CHF
151 PERM PACEMAKER IMPL W/O AMI/CHF
152 PACEMAKER REPL/REVIS EXC P GEN
153 REPLACEMENT PULSE GENERATOR
154 VEIN LIGATION & STRIPPING
155 OTHER OR PROCED, CIRCUL SYST
156 AMI WITH CVS COMPLICATIONS
157 AMI W/O CVS COMPLICATIONS
158
159 CIR DIS EX AMI W CATH, COMPLEX
160 CIRC EX AMI W CATH, NOT COMPLEX
161 ACUTE/SUB-ACUTE ENDOCARDITIS
162 HEART FAILURE & SHOCK
163 DEEP VEIN THROMBOPHLEBITIS
164 CARDIAC ARREST
165 PERIPH VASC DX, AGE>70/CC
166 PERIPH VASC DX, AGE<70, NO CC
167 ATHEROSCLEROSIS, AGE>70/CC
168 ATHEROSCLEROSIS, AGE<70, NO CC
169 HYPERTENSION
170 CONGEN CARD/VALV DX, AGE>70/CC
171 CONGEN CARD/VALV DX, 18-69, NO CC
172 CONGEN CARD/VALV DX, AGE 0-17
173 ARRYHTMIA/CONDUCT, AGE>70/CC
174 ARRYHTMIA/CONDUCT, AGE<70, NO CC
175 SYNCOPH/COLLAPSE, AGE>70/CC
176 SYNCOPH/COLLAPSE, AGE<70, NO CC
177 CHEST PAIN
178 OTHER CIRC DX WITH CC
179 OTHER CIRC DX W/O CC
180
181
182
183
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185
186
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190
191 RECTAL RESECTION, AGE>70/CC
192 RECTAL RESECTION, AGE<70, NO CC
193 MAJOR BOWEL PROC, AGE>70/CC

CCMG

Title

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194 MAJOR BOWEL PROC, AGE<70, NO CC
195 PERIT ADHESIOLYSIS, AGE>70/CC
196 PERIT ADHESIOLYSIS, AGE<70, NO CC
197 MINOR BOWEL PROC, AGE>70/CC
198 MINOR BOWEL PROC, AGE<70, NO CC
199 STOM/ESOPH/DUOD OP, AGE>70/CC
200 STOM/ESOPH/DUOD OP, 18-69, NO CC
201 STOM/ESOPH/DUOD PROC, AGE 0-17
202 ANAL PROCED, AGE>70/CC
203 ANAL PROCED, AGE<70, NO CC
204 HERNIA REP EX IN/FE, AGE>70/CC
205 HERNIA REP EX ING/FE, 18-69, NOCC
206 ING/FEM HERNIA PROC, AGE>70/CC
207 ING/FEM HERNIA OP, 18-69, NOCC
208 HERNIA PROCEDURES, AGE 0-17
209 APPENDEC W COMPL DX, AGE>70/CC
210 APPENDEC, COMPL DX, AGE<70/CC
211 APPENDEC, UNCOMPL DX, AGE>70/CC
212 APPENDEC, UNCOMPL DX, AGE<70, NO CC
213 MOUTH PROCED, AGE>70/CC
214 MOUTH PROCED, AGE<70, NO CC
215 OTH DIGESTIVE PROC, AGE>70/CC
216 OTH DIGESTIVE PROC, AGE<70, NO CC
217 DIGEST MALIGNANCY, AGE>70/CC
218 DIGEST MALIGNANCY, AGE<70, NO CC
219 GI HAEMORRHAGE, AGE>70/CC
220 GI HAEMORRHAGE, AGE<70, NO CC
221 GI ULCER, COMPLICATED M.R.DX
222 GI ULCER, UNCOMPLIC, AGE>70/CC
223 GI ULCER, UNCOMPL, AGE<70, NO CC
224 IMFLAMMATORY BOWEL DISEASE
225 GI OBSTRUCTION, AGE>70/CC
226 GI OBSTRUCTION, AGE<70, NO CC
227 ESOPHAGIT, GASTRO, MISC, >70/CC
228 ESOPHAGIT, GASTRO, MISC, 18-69, NOC
229 ESOPHAGIT, GASTRO, MSC, AGE 0-17
230 DENT/ORAL EX EXTR/RES, AGE 18+
231 DENT/ORAL EX EXTR/RES, AGE 18+
232 DENTAL EXTRACTION/RESTORATION
233 OTHER GI DX, AGE>70/CC
234 OTHER GI DX, AGE 18-69, NO CC
235 OTHER GI DX, AGE 0-17
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246 MAJOR PANCR, LIVER SHUNT PROC
247 MINOR PANCR, LIVER SHUNT PROC
248 BILIARY TRACT, AGE>70/CC
249 BILIARY TRACT, AGE<70, NO CC
250 CHOLECYSTEC W CDE, AGE>70/CC
251 CHOLECYSTEC W CDE, AGE>70, NOCC
252 CHOLECYSTEC/NO CDE, AGE>70/CC
253 CHOLECYSTEC/NO CDE, AGE<70, NOCC
254 HEPATIC DIAG PROC FOR MALIGN
255 HEPATIC DIAG PROC FOR NON-MALIGN
256 OTH HEPATOBIL/PANCREAS PROC
257 CIRRHOSIS, ALCOHOLIC HEPATITIS
258 HEPATIC/BILIARY MALIGNANCY
259 PANCREAS DIS EXC MALIGNANCY
260 LIVER EX MALIG/CIRR, AGE<70/CC
261 LIVER EX MALIG/CIRR, AGE<70, NOCC
262 BILIARY TRACT DIS, AGE>70/CC
263 BILIARY TRACT DIS, AGE<70, NOCC
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274 MAJOR JOINT PROCEDURES
275 OTH HIP/FEMUR PROC, AGE>70/CC
276 OTH HIP/FEMUR PROC, 18-69, NOCC
277 OTH HIP/FEMUR PROC, AGE 0-17
278 AMPUT F USC/SKEL/CONN TIS DX
279 BACK/NECK PROC, AGE>70/CC
280 BACK/NECK PROC, AGE<70, NO CC
281 MUSCULOSKEL/CONN TISS BIOPSY
282 WND DEBRID/SKN GRAFT EX HAND
283 OTH LOW EXTREM PROC, AGE>70/CC
284 OTH LOW EXTREM PROC, 18-69, NOCC
285 OTH LOW EXTREM PROC, AGE 0-17
286 KNEE PROCEDURE, AGE>70/CC
287 KNEE PROCEDURE, AGE<70, NO CC
288 OTH UPP EXTREM PROC, AGE>70/CC
289 OTH LOW EXTREM PROC, AGE<70, NO CC

CCMG Title

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290 FOOT PROCEDURES

291 SOFT TISSUE PROC, AGE>70/CC

292 SOFT TISSUE PROC, AGE<70, NOCC

293 HAND GANGLION PROCEDURES

294 HAND PROCEDURS EX GANGLION

295 LOC EXCIS, REMOV FIX HIP/FEMUR

296 OTH LOC EXCIS/REMOV FIXAT DEV

297 ARTHROSCOPY

298 OT MUSCSK/CONN PROC, AGE>70/CC

299 OT MUSCSK/CONN PROC, AGE<70,NOCC

300 FRACTURES OF FEMUR

301 FRACTURES OF HIP & PELVIS

302 SPR/STR/DISLOC HIP/PELV/THIGH

303 OSTEOMYELITIS

304 PATH FRACT & MUSCSKEL MALIG

305 CONN TISS DIS, AGE>70/CC

306 CONN TISS DIS, AGE<&), NO CC

307 SEPTIC ARTHRITIS

308 MEDICAL BACK PROBLEMS

309 BONE DX/SPC ARTHROP, AGE>70/CC

310 BONE DX/SPC ARTHROP, <70,NO CC

311 NON-SPECIFIC ARTHROPATHY

312 MUSCULOSK/CONN TISS SIGN/SYMP

313 TENDONITIS, MYOSITIS, BURSITIS

314 AFTERCARE MUSCULOSK/CONN TISS

315 FR/SPR HIND/F-ARM/FT, AGE>70/CC

316 FR/SPR HIND/F-ARM/FT, 18-69NOCC

317 FR/SPR HIND/F-ARM/FT, AGE 0-17

318 FR/SPR U-ARM/L-LEG, AGE>70/CC

319 FR/SPR U-ARM/L-LEG, AGE, 18-69, NOCC

320 FR/SPR U-ARM/L-LEG, AGE 0-17

321 OTHER MUSCULOSK/CONN TISS DX

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337 TOT MASTECT W MALIG, AGE>70/CC

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338 TOT MASTECT W MALIG, AGE<70, NOCC
339 STOT MASTECT W MALIG, AGE>70/CC
340 STOT MASTECT W MALIG, AGE<70, NOCC
341 BRST PROC EX BIOP/EX,N-MALIG
342 BRST BIOP/LOC EXCIS,NON-MALIG
343 SKIN GRFT W ULC/CELL, AGE>70/CC
344 SK GRFT W ULC/CELL,AGE>70NOCC
345 SK GRFT EX ULC/CELLULIT,CC
346 SK GRFT EX ULC/CELLULIT, NO CC
347 PERIANAL, PILONIDAL PROCEDURES
348 PLASTIC SKIN,SUBCU,BREAST PROC
349 OT SKIN,SUBC,BRST OP,AGE>70/CC
350 OT SKIN,SUBC,BRST OP,AGE>70,NOCC
351 SKIN ULCER
352 MAJOR SKIN DIS, AGE>70/CC
353 MAJOR SKIN DIS, AGE<70, NO CC
354 MALIG BREAST, AGE>70/CC
355 MALIG BREAST, AGE<70, NO CC
356 NON-MALIG BREAST DISORDERS
357 CELLUITIS, AGE>70/CC
358 CELLUITIS, AGE 18-69, NO CC
359 CELLUITIS, AGE 0-17
360 TRAUM SK/SUBC/BRST, AGE>70/CC
361 TRAUM SK/SUBC/BRST, 18-69,NOCC
362 TRAUM SK/SUBC/BRST, AGE 0-17
363 MINOR SKIN DIS, AGE>70/CC
364 MINOR SKIN DIS, AGE
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375 AMP W ENDOCR/NUTR/METAB DIS
376 ADRENAL,PITUITARY PROCEDURES
377 SK GRFT/DEBR W ENDOCR/NUT/MET
378 OR PROCEDURES FOR OBESITY
379 PARATHYROID PROCEDURES
380 THYROID PROCEDURES
381 THYROGLOSSAL PROCEDURES
382 OT ENDOCR/NUT/METAB OP,>70/CC
383 OT ENDOCR/NUT/METAB OP,<70,NOCC
384 DIABETES, AGE 36+
385 DIABETES, AGE 0-35

CCMG

Title

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386 NUTR/MISC METAB DIS, AGE>70/CC
387 NUTR/MISC METAB DIS, 18-69,NOCC
388 NUTR/MISC METAB DIS, AGE 0-17
389 INBORN ERRORS OF METABOLISM
390 ENDOCRINE DISORDERS, AGE>70/CC
391 ENDOCRINE DISORDERS, AGE<70,NOCC
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402 KIDNEY TRANSPLANT
403 KID/UR/MAJ BLADDER OP W NEOPL
404 KUB PROC W NON-NEOP, AGE>70/CC
405 KUB OP W NON-NEOP,AGE<&),NOCC
406 PROSTATECTOMY, AGE>70/CC
407 PROSTATECTOMY, AGE<70,NOCC
408 MINOR BLADDER OP, AGE>70/CC
409 MINOR BLADDER OP, AGE<70, NOCC
410 TUR PROCEDURES, AGE>70/CC
411 TUR PROCEDURES, AGE<70,NOCC
412 URETHRAL PROC, AGE>70/CC
413 URETHRAL PROC, AGE 18-69,NO CC
414 URETHRAL PROC, AGE 0-17
415 OTH KIDNEY, UR TRACT PROCEDURE
416 RENAL FAILURE W/O DIALYSIS
417 RENAL FAILURE WITH DIALYSIS
418 NEOP KIDNEY, URIN TR, AGE>70/CC
419 NEO KIDNY, URIN TR,AGE<70,NOCC
420 KIDNEY/URIN INFECT, AGE>70/CC
421 KIDNEY/URIN INFECT, 18-69,NOCC
422 KIDNEY/URIN INFECT, AGE 0-17
423 URINARY STONES, AGE>70/CC
424 URINARY STONES, AGE<70,NOCC
425 KIDNEY/URIN SIGN/SYM, AGE>70/CC
426 KIDNEY/URIN SIGN/SYM,18-69,NOCC
427 KIDNEY/URIN SIGN/SYM,AGE 0-17
428 URETHRAL STRICTURE, AGE>70/CC
429 URETHRAL STRICTURE, 18-69,NOCC
430 URETHRAL STRICTURE, AGE 0-17
431 OTH KIDNY, URIN DIS, AGE>70/CC
432 OTH KIDNY, URIN DIS, 18-69,NOCC
433 OTH KIDNY, URIN DIS, AGE 0-17

CCMG	Title
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444	MAJOR MALE PELVIC PROC W CC
445	MAJOR MALE PELVIC PROC NO CC
446	TURP, AGE>70/CC
447	TURP, AGE<70, NO CC
448	TESTES PROC FOR MALIGNANCY
449	TESTES OP, NON-MALIG, AGE>18
450	TESTES OP, NON-MALIG,AGE 0-17
451	PENIS PROCEDURES
452	CIRCUMCISSION, AGE 18+
453	CIRCUMCISSION, AGE 0-17
454	OTH MALE REPROD OP FOR MALIG
455	OT MALE REPROD OP W NON-MALIG
456	MALE REPROD MALIG, AGE>70/CC
457	MALE REPROD MALIG, AGE<70,NOCC
458	B.P.H., AGE>70/CC
459	B.P.H., AGE<70, NO CC
460	INFLAMATION MALE REPROD SYST
461	MALE STERILIZATION
462	OTH MALE REPROD SYST DX
463	
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473	PV EVIS/RAD HYSTERECT/VULVECT
474	NONRAD HYSTERECTOMY, AGE>70/CC
475	NONRAD HYSTERECTOMY, AGE<70,NOCC
476	FEM REPRO SYST RECONSTRUCTION
477	MALIG UTER/ADNEX OP X TUB INT
478	NONMAL UTER/DN OP EX TUB INT
479	TUBAL INTERRUPTION W NONMALIG
480	VAGINA,CERVIX,VULVA PROCEDURE
481	LAPAROSCOPY,ENDOSC EX TUB INT

CCMG

Title

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482 LAPAROSCOPY TUBAL INTERRUPT
483 D&C, CONIZ, IMPLANT W MALIG
484 D&C, CONIZ, IMPLANT EX MALIG
485 OTH FEM REPRODUCTIVE SYS PROC
486 MALIG FEM REPRO SYS, AGE>70/CC
487 MALIG FEM REPRO SYS, AGE<70, NOCC
488 INFECTION FEM REPROD SYSTEM
489 MENSTRUAL, OTH FEM REPROD DX
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500 PP HAEM, COMP OB WND W OR PROC
501 PP HAEM, COMP OB WD, NO OR PROC
502 C-SECTION W CC
503 C-SECTION, NO CC
504 VAG DELIVERY, W COMPLIC DX
505 VAG DELIVERY, NO COMPLIC DX
506 VAG DELIVERY, W STERILIZ/D&C
507 VAG DEL W OR PROC EX STER/D&C
508 ECTOPIC PREGNANCY
509 THREATENED ABORTION
510 ABORTION WITH D&C
511 ABORTION W/O D&C
512 FALSE LABOUR
513 OTH OBS DX, NO DELIVERY CODED
514 OTH PUERPERAL COMPLICATION
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525 NEONATES, TRANSFERRED
526 EXTREME IMMATUREITY, NEONATE
527 PREMATURITY W CC
528 PREMATURITY, NO CC
529 NEONATES W SIGNIFICANT PROBLEM

CCMG	Title
530	FULL TERM NEONATE V CC
531	NORMAL NEWBORN, NO CC
532	
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537	SPLENECTOMY, AGE 18+
538	SPLENECTOMY, AGE 0-17
539	OTH HP BLEED BLD FORMINA, ORG
540	RED BLEED BLD DIS, AGE 18+
541	RED BLEED BLD DIS, AGE 0-17
542	COAGULATION DISORDERS
543	RETI ENDITE LUN DIS, >70 CC
544	RETI ENDITE LUN DIS, >70, NOCC
545	
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550	LYMPHOMA, LEUKEMIA V MAJOR OP
551	LYMPHOMA, LEUK, MINOR OP, >70 CC
552	LYMPHOMA, LEUK, MIN OP, <70, NOCC
553	LYMPHOMA, LEUKEMIA, AGE >70/CC
554	LYMPHOMA, LEUKEMIA, 18-69, NO CC
555	LYMPHOMA, LEUKEMIA, AGE 0-17
556	MYELOPROLIF DIS V MAJ OP, CC
557	MYELOPROLIF DIS V MAJ OP, NOCC
558	MYELOPROLIF DIS V MINOR OP
559	RADIOTHERAPY
560	CHEMOTHERAPY
561	HIST MALIGNANCY V/O ENDOSCOPY
562	HIST MALIGNANCY V ENDOSCOPY
563	OTH MYELOPROLIF DX, AGE >70/CC
564	OTH MYELOPROLIF DX, AGE <70, NOCC
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575	OR PROC V INFECTION/PARASITIC DIS
576	SEPTICAEMIA, AGE 18
577	SEPTICAEMIA, AGE 0-17

CCMG

Title

578 POSTOP/POST-TRAUMA INFECTIONS
579 FEVER UNKNOWN ORIG, AGE>70/CC
580 FEVER UNKNOWN ORIG, 18-69,NOCC
581 VIRAL ILLNESS, AGE 18+
582 VIRAL ILLNESS/PUO, AGE 0-17
583 OTH INFECT/PARASITIC DISEASE
584
585
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589 OR PROC W MENTAL ILLNESS
590 ADJ REACT/PSYCHOSOC DYSFUNCT
591 DEPRESSIVE NEUROSES
592 NEUROSES EXC DEPRESSIVE
593 DISOR PERSONALITY/IMPULS CNTL
594 ORG DISTURB,MENT RETARDATION
595 PSYCHOSES
596 CHILDHOOD MENTAL DISORDERS
597 OTHER MENTL DISORDERS
598
599
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602
603 OR PROC W SUB-INDUCED MENT DX
604 DRUG DEPENDENCE
605 DRUG USE EXC DEPENDENCY
606 ALCOHOL DEPENDENCE
607 ALCOHOL USE EXC DEPENDENCY
608 ALCOHOL/SUBST-INDUC MENT SYND
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614 SKIN GRAFT FOR INJURIES
615 WND DEBRIDEMENT FOR INJURIES
616 HAND PROCEDURES FOR INJURIES
617 OTH OP FOR INJURIES, AGE>70/CC
618 OT OP FOR INJURY, AGE<70,NO CC
619 TRAUMA, AGE>70/CC
620 TRAUMA, AGE 18-69, NO CC
621 TRAUMA, AGE 0-17
622 ALLERGIC REACTION, AGE 18+
623 ALLERGIC REACTION, AGE 0-17
624 TOXIC DRUG EFFECT, AGE>70/CC
625 TOXIC DRUG EFFECT, 18-69,NO CC
626 TOXIC DRUG EFFECT, AGE 0-17

CCMG

Title

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627	TREATMENT COMPLIC, AGE>70/CC
628	TREATMENT COMPLIC, AGE<70, NOCC
629	OTH INJ/POIS/TOX, AGE>70/CC
630	OTH INJ/POIS/TOX, AGE<70, NO CC
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641	BURNS XFER TO OTH ACUTE HOSP
642	BURNS SPECIFIED AS EXTENSIVE
643	NON-EXTENS BURN W SKN GRAFT
644	NON-EXTENS BURN W DEBRID/OTH
645	NON-EXTENS BURN W/OR OR PROC
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651	OR PROC W OTH CONTACT HLTH SV
652	REHABILITATION
653	SIGNS & SYMPTOMS W CC
654	SIGNS & SYMPTOMS W/O CC
655	AFTERCARE W HIST OF MALIG
656	AFTERCARE W/O HIST OF MALIG
657	OTH FACTORS INFLU HLTH STATUS
658	TOTAL

END

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